

FIFTH EDITION

THE

HEALTH

REVOLUTION

--ROSS HORNE--

*To Nathan Pritikin  
with thanks*

Modern man has greater knowledge and farther horizons than his predecessors. As each new generation faces the world, the inventors and creators enthusiastically contribute their original ideas to further human progress--often in the face of ridicule, apathy, and stony opposition. The vantage point from which we now survey the world is the product over many centuries, of such men.

Harper Collins Publishers

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## "PRE-PREFACE"

*"There is little question any more that artery plaque reversal can for the first time be considered possible."* Dr Nash in *Circulation*, official journal of the American Heart Association, September 1977.

*"With a cholesterol level of 150 or less, plaque reversal in two years is possible."* Dr R Wissler, Chicago Medical School, addressing the American Heart Association, June 1977.

*"The three major killers in modern society, Coronary Heart Disease, Cancer and Strokes, can all be linked to what people eat and drink."* Dr B Hetzel, Chief of the CSIRO Division of Human Nutrition and Foundation Professor of Social and Preventive Medicine, Monash University.

*"The major cancers of our time are diet-caused, mainly by fat and cholesterol."* Dr Ernst Wynder, American Health Foundation, addressing the USA Government Senate Select Committee on Nutrition and Human Needs.

*"With this kind of approach, diet only, 80% of diabetics in this country could be normal in 30 to 90 days."* Dr James Anderson, University of Kentucky Medical Centre.

## THE STORY THAT STARTED IT ALL!

## HEART VICTIMS ON 10-MILE WALKS IN NEW PROGRAM

### ***"ASTOUNDING" RESULTS FROM DIET, EXERCISE PLAN***

**ELDERLY heart disease victims were able to walk up to 10 miles a day after undertaking a new diet and exercise program, a medical conference was told.**

Previously, they could walk only a few hundred feet, doctors reported.

The doctors told the conference in Atlanta that the program had produced "astounding"

results.

**The diet strictly controls the intake of all fat, both saturated and unsaturated.**

The doctors, who conducted the diet study, said the most significant finding was evidence which indicated generalised atherosclerosis, or hardening of the arteries, can be reversed in humans by diet, as it has been demonstrated to be done in monkeys.

The study was conducted by the Longevity Research Institute of Santa Barbara, California.

It was presented at the American Congress of Rehabilitation Medicine.

The doctors said some elderly people in the program were walking at least six miles and some 10 miles a day before the end of the six-month study.

**All began jogging before the study's end, they said.**

In some patients, angina was reduced 100 per cent and hypertension, or high blood pressure, 75 per cent without drugs.

Some subjects in the study who also suffered from diabetes experienced a return to normal without drugs.

Dr Stewart Gorney said the project "was the first controlled study in man of heart disease which has shown a reversal of this disease.

He termed it "major new evidence that heart disease, the major cause of death in the United States, can be reversed."

Doctors said the study used a new therapeutic technique with patients with advanced degenerative vascular diseases.

**The rapid return toward normal health had occurred in patients with symptoms of coronary insufficiency with angina, hypertension, leg pain, diabetes, arthritis, gout and other symptoms of degenerative vascular disease.**

In 30 days, all patients had improved to the point where drugs were no longer needed.

The program of diet and exercise was so

effective that several angina patients preparing for open heart surgery had tested normal in four to 12 weeks.

**Dr Gorney said the diet calls for a restriction of fat intake, both saturated and unsaturated, to 10 per cent.**

An average American diet is 42 per cent.

"Combined with a controlled exercise routine, the diet produces changes within a few weeks which increase blood flow and raise the oxygen content of the blood," he said.

"The improved circulation quickly betters the patient's condition and permits the body to start the healing process that is the key to permanent recovery."

AAP, New York  
*The Sun*, Wed, December 10, 1975

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# THE HEALTH REVOLUTION

*Author's Preface to the 5th Edition*

*Sit down before fact as a child.  
Be prepared to give up every pre-conceived notion.  
Follow humbly where nature leads, or you will learn nothing."*

Thomas Huxley

*The Health Revolution* was first published in 1980. The inspiration to write it stemmed from my experience of meeting Nathan Pritikin in 1976 and observing first-hand the miracles his program was achieving in returning people with advanced heart disease back to sound health again. My own wife, pronounced by specialists to be beyond medical help and in a dying condition, was one of them.

The first edition contained 282 pages, and the dietary advice in it was Pritikin, right down the line. Pritikin claimed his diet to be the best in the world and I believed him. Just to read the 893 case histories of Pritikin's first patients reviewed by the Loma Linda University in 1978 would convince anybody of that.

However, as time went by, it became evident that there were serious pitfalls in Pritikin's dietary methods because, along with the benefits the methods achieved, there were upsets in blood chemistry that in many cases led to arthritis, and in other cases, subsequently, to cancer.

Following editions of *The Health Revolution* revealed these dangers, and as my knowledge increased, so the size of the book increased by over one hundred pages. And specifically for the benefit of the, by now, many Pritikin devotees, I produced a new book called *Improving on Pritikin*.

Further books followed to enlarge upon aspects and issues deserving more attention to that provided in *The Health Revolution* (already daunting enough in size) and these are *Health & Survival in the 21st Century* (1992) and *Cancerproof Your Body* (1996).

All of these books have been best sellers, and although *The Health Revolution* has been out of print for years, there is still such a strong demand for it that HarperCollins have gone ahead and brought out this fifth edition. And because *Cancerproof Your Body* has been so successful, they are going ahead with a reprint of *Health & Survival in the 21st Century* as well.

This fifth edition of *The Health Revolution* is essentially the same as the fourth except for some fairly minor changes. What was true in 1985 is true today and will always be true. Sound health is your God-given birthright. If you have it, don't lose it. If you have already lost it--then get it back. Anything is easy when you know how. These books tell you how.

Happy Landings  
Ross Home  
1997





# FOREWORD 1

*by Dr Dean Burk, Washington DC*

*(A foundation member of the US National Cancer Institute and former head of the institute's Cytochemistry Department, Dr Burk is best known for his work in cancer research for which he has received honors from France, Britain, Germany and the USSR. Formerly Associate Professor of Biochemistry, Cornell University, he has worked in cancer research at the Kaiser Wilhelm Institute in Germany and at the USSR Academy of Science, Moscow. Dr Burk is the recipient of the Domagk Prize for cancer research, a Knight Commander of the Medical Order of Bethlehem, and a Knight of the Mark Twain Society. He is co-author of the books Cancer, Approaches to Tumor Chemotherapy and Cell Chemistry, and author of over 250 published scientific papers.)*

Having spent most of my professional life in the field of cancer research--a field of great complexity and no little confusion--I was astonished and delighted to become acquainted with this book.

My astonishment arises from the discovery that a layman (the author is a retired airline captain) should have gained such a comprehensive understanding of the complex biological processes which lead to the disease called cancer and to be able to describe these processes in a manner easily understandable by other laymen.

The author describes the origins not only of cancer but of other so-called diseases of civilization and the natural measures required to avoid and control them.

When it is considered that few medical professionals possess this knowledge, this is no mean achievement.

The strength, integrity and happiness of a nation are directly proportional to the state of health of its citizens. In the distant past civilizations have risen, flourished and declined, their ruins covered by desert sands. Did affluence destroy them? Are we heading the same way?

Perhaps humans are too clever for their own good. In the pursuit of Progress and pleasure they at the same time sow the seeds of their own destruction.

Modern man must comprehend the message presented in this book that the greatest threat to his survival is not that of nuclear war, because although that threat is real, at least everyone is aware of it. The threat most dangerous to mankind comes from the destroyers active right now, subtle and unseen--the poisoning of our soil and water supplies, the denaturing of our food, the ever-increasing destruction of the environment.

No more do people die of old age--instead, heart attacks, strokes, cancer, diabetes and so on, are today accepted as normal causes of death. Influenza, arthritis, indigestion, constipation, aches and pains and medicine, are a normal part of life. Are coronary bypasses, hysterectomies, reading glasses, hearing aids, wheelchairs, false teeth and plastic hip joints, to be considered normal too?

On his long evolutionary journey, man has strayed onto dangerous ground. Now we are at a crossroads,

and whichever way we take there will be some rough going. As ever, the fittest will survive.

Ross Home's book is a survival manual for the trip ahead.

Dean Burk  
July 1984

## FOREWORD 2

*by Dr Archie Kalokerinos, Bingara, N.S.W.*

*(Dr Kalokerinos, now in general practice, was for many years health advisor to the National Aboriginal Consultative Committee in Canberra and previous to that was Medical Superintendent, Collarenebri District Hospital. He is best known for his work in preventing infant mortality and is author of the book Every Second Child [1974, Thomas Nelson].)*

TO be healthy and to live a long time is the aim of nearly every person. Unfortunately) few achieve it and the reasons why need careful consideration. Obviously, many factors are involved in the maintenance of good health.

We could begin by listing genetic factors, physical fitness, the environment, psychology, diet and lifestyle. Deliberately I have omitted physicians, medications and hospitals because it is becoming painfully obvious to practitioners that their impact is remarkably small and has practically no beneficial effect on community health. Yet, in our modern society, the vast bulk of effort and expenditure goes towards physicians, hospitals and medications. As technology increases, demand for services increases and it is probable that, unless a brake is applied, our society could spend half its national income in a futile effort to buy health. Health cannot be bought.

Human nature is such that the average individual is loath to work for good health. He wants a magical prescription, an operation, an all-powerful physician or some electronic marvel that will provide answers for everything. For example, most people would prefer that lung cancer had no connection with smoking and could be easily controlled by "medical science" with "miracle" drugs. A doctor who advocates sensible preventive measures usually loses such patients to another doctor with a ready prescription pad.

Physical fitness, attention to the environment, relaxed psychology, correct diet and lifestyles are the key factors to good health. A few individuals may be genetically strong enough to ignore most of these and still remain healthy for a long time, but the average person must obey the rules--or suffer. To become a functionless mass of distorted body parts is not an accident, it results from a bad lifestyle unknowingly, or perhaps knowingly, followed habitually for years.

Diet correction is where we need to begin in the search for longevity. Over the years fads have emerged. Most have good points; most are illogical in that they consider factors out of perspective. For optimum physical fitness we must go back to how "nature intended" us to eat--like our forefathers who foraged and hunted in the forests. Their diets consisted mainly of wild fruit and various plants eaten raw, with very little consumption of fat or animal protein. In other words, the diet for good health is not "high protein" but high natural carbohydrate. To replace natural carbohydrates with refined forms (such as white flour and sugar) is, of course, a disaster no matter how careful one may be in the selection of other foods. South Sea Islanders who consume great amounts of fresh fruits and vegetables and also masses of white flour and sugar demonstrate this point clearly. They suffer from degenerative diseases such as diabetes at alarming rates and their life expectancy is poor. To live almost exclusively on refined carbohydrates is a double disaster. Processed foods, artificial preservatives, sweeteners, colorings and flavorings add to the horror of bad health. One may partially correct the problem by adding certain vitamins and minerals, but full correction is not possible.

Physical fitness is the next factor that needs consideration. Oxygen, nutritional foods and waste products cannot get into and out of cells when the circulation is sluggish. In the physically unfit, major blood vessels block, the microcirculation. in the capillaries becomes sluggish and the result is impaired cellular metabolism, the cause of degenerative diseases which include cancer.

Fortunately, and this is a major message in this book, these changes are often reversible. Thus a person who has, for example, established heart disease, can, by correcting diet and becoming physically active, improve the circulation and "cure" the heart disease. Surely this is a better way of handling the problem than open heart surgery or coronary by-pass operations that may relieve the pain. This represents, in my own lifetime, a complete reversal of principles. In my early years, patients were forced into bed and even had their teeth washed for them. How many were killed by such "kindness" is best not thought about. One knows that if tissues are to remain healthy, or regain health, a degree of activity to stimulate the circulation is necessary.

Although minor details may change over the years as more knowledge filters through, there is only one sure road to good health. Reading this book will illuminate that road. To argue against it will get one nowhere because, for the average individual, there is no alternative.

Archie Kalokerinos  
July 1984

## FOREWORD 3

*by Professor John Wright*

*(Formerly the Associate Professor of Surgery, University of New South Wales, and Head of the Departments of Cardiothoracic Surgery, The Prince Henry Hospital and The Prince of Wales Hospital, Sydney.)*

It is appropriate that this book should be written as part of a broadening endeavor to alert us to the cost in lives, ill health and dollars, of diseases which have become endemic in Western countries. Leading these degenerative conditions are atherosclerosis, the commonest form of cardiovascular disease, and cancer, which together account for the majority of deaths in these countries.

The records show, of course, only the detected cases. A far greater number of the population carry these diseases within them, advancing unsuspected and uncontrolled.

Mr Home has correlated the appalling incidence of the degenerative diseases, particularly cardiovascular, with multiple risk factors which have become the norm in our dietary and habitual environment. If any more salutary reminder were needed of the subtle but catastrophic effects of our environment, it would be in those studies of cardiovascular disease, such as that in Busselton, Western Australia, which have revealed that atherosclerosis is present in the majority of the population, even among children and adolescents, sometimes in an advanced state.

As Mr Home correctly observes, traditional treatment of atherosclerosis addresses itself to the "matured" symptomatic disease and to its life-threatening complications. Relatively little expenditure is directed to the crucial issues of why it occurs in our young and how we can arrest its onset and awful progress. Obviously, traditional treatment can only be truly profitable if used in conjunction with the strongest efforts to reduce causal factors.

It is not enough to merely recognize that economics, advertising, expediency and habit have contributed largely to a general deterioration in health and a rise in early mortality and morbidity. People need advice and direction. Clearly, conventional dietary and other advice does not go far enough to alter the metabolic disturbances which produce degenerative disease. However, the dietary regimes discussed in this book, largely empirical as they may be, appear to significantly correct these metabolic disturbances and to largely restore the proper body chemistry necessary for health. They rest on analysis of primitive diets and long-known information which finds strong correlations between dietary modification and symptomatic improvement in a great number and variety of disease processes. To include cancer amongst these degenerative diseases seems, at first, presumptuous, but there is increasing evidence that dietary factors play a crucial role in the complex area of neoplasia [cancer]. This story has not yet been told fully.

Although these diets are at first difficult to implement and difficult to persist with, requiring a large amount of self-discipline until new tastes are acquired, there can be no doubt that the benefits are rapidly recognized and clearly not placebo in origin. The splendid companion cookbook to this volume facilitates a transition to a new, dietary way of life.

This book accumulates a prodigious compendium of information on body chemistry, diet, disease processes, exercise and other environmental factors, as seen by a longtime student of these matters who is highly informed and who has researched his subjects widely. Of course, this has been accomplished without inhibition by customary medical attitudes or by traditional thinking and teaching. I believe that this book bridges a broad gap between what has been and is, and what should be. Mr Home is to be congratulated and admired, I believe, for filling so many gaps in conventional nutritional awareness.

John Wright MB BS FRACS FACS

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# INTRODUCTION

At the University of California, Santa Barbara, a 51-year-old man stepped off a treadmill, panting. He had just run three miles in 20 minutes during which time his electrocardiogram (ECG) had been closely observed by a medical team. While running, his heart had maintained a rate of 177 beats a minute, steady and strong--yet five years before, his doctor had told him to avoid walking because of heart disease so severe that pronounced symptoms were evident at a heart rate of only 80.

The cardiologist examined again the trace of each heart beat recorded on the ECG during the test. All were perfect. They looked at each other.

That was in 1966 and the man was Nathan Pritikin, soon to become the leader of a worldwide revolution. Gaining momentum, it is a "bloodless revolution"--a revolution against disease. . .

Heart disease and cancer are ruthless killers. There are other killers, perhaps less sinister, but no less final. Together they threaten the community--who will be next?

There is a growing awareness of this peril generated by the press and popular magazines whose frequent medical articles highlight the appalling state of health, both mental and physical, that exists among the general population.

It has become apparent that "health insurance schemes" costing billions of dollars do not achieve much more than maintaining a lot of people too sick to work. These schemes are not health schemes at all--they are "sickness schemes", the main effect of which is to boost the evergrowing medical and drug industry.

At the same time, the natural health movement is growing--because observant people realize all this and can see that to avoid heart attacks, strokes, and other killing diseases, they must follow a lifestyle which keeps their bodies in good condition.

To plan such a lifestyle, a reasonable understanding of the factors involved is necessary. Many people conscientiously follow health programs but achieve nowhere near their potential because their programs contain mistakes, mainly in dietary advice. These mistakes result from misconceptions widely held by professional nutritionists and which are continually repeated in many health books and articles. Some of these misconceptions are quite dangerous and can have harmful effects over a period of time.

This book is intended to give you the knowledge and understanding required in order for you to evaluate your present lifestyle and make any correction should you then choose. The simple concept of natural health is not new and after many years is beginning to gain wide acceptance. Fifty years ago, Dr Are Waerland, a pioneer in the natural health movement declared, "We are not concerned with diseases but with mistakes . . . of living. Get rid of the mistakes and the diseases will disappear of their own accord." However, let us first discuss what is disease. Literally, dis-ease means the absence of ease.

Disease of one sort or another has always threatened mankind. The diseases responsible for most suffering and death over the centuries have been caused by malnutrition, and by germ and virus infections. These are called deficiency diseases and infectious diseases, and were common together because,

weakened by malnutrition, and misery, a person became easy prey to infections which otherwise would have been easily repelled.

Nutrition was not understood, and germs, bacteria and viruses were unknown about one hundred years ago. When the germ theory was discovered and "proven" it was natural that all diseases were suspected to be caused by germs of some kind, and all sorts of new drugs were invented to combat them. A third group of diseases, which in the past afflicted only the affluent few in the population, has become prevalent in the 20th Century as the industrial nations have become wealthier and society generally has not only become more affluent but at the same time subjected to greater stress. These diseases are called degenerative and metabolic diseases and are often referred to as "diseases of affluence". Some of them are triggered or badly aggravated by mental stress and are therefore sometimes further categorised as "stress-related diseases" or "diseases of adaptation".

Because deficiency diseases often responded to minerals and vitamin medicines, and because modern drugs seemed effective in controlling infectious diseases, orthodox medical practice practically ignored diet structure and mental stress as disease factors. So as the incidence of heart disease, strokes, cancer and a host of others steadily increased, conventional medical methods were naturally enough employed to combat them too.

Countless drugs, chemical preparations, radiation and surgery have been tried unsuccessfully, and for years the few people who could see the real causes of these diseases, were ignored. Non-acceptance of any unconventional idea is human nature, and previously the germ theory proponents had met with similar opposition.

But the accumulated weight of evidence is now so great that the real factors causing degenerative diseases are becoming widely recognized.

## **Doctor says health not improving**

The health of people in NSW is not improving despite the huge increase in health services funds, the chairman of the Health Commission of NSW, Dr R. McEwin, said yesterday.

"Modern epidemics like accidents and coronary artery disease are damaging and destroying not only the old and weary but the young and vigorous," he told the annual general meeting of the Prince Henry, Prince of Wales and Eastern Suburbs group of hospitals.

The mortality rates were increasing for the five major causes of death--coronary artery disease, cancer, cerebrovascular disease, accidents, and bronchitis, emphysema and asthma.

"One would have hoped that as the death rates from infectious diseases fell due to better sanitation and antibiotics, we would be healthier and live longer lives," he said.

"But this is not so because there has been

an equal rise in death rates from these so-called societal diseases--diseases related to our environment and lifestyle."

Three out of four Australian deaths could be attributed to factors relating to lifestyle.

That news item from the *Sydney Morning Herald* describes a situation far graver than a fuel crisis, an assassination, or even a war, and yet it only received a few inches of small print. The situation is the same in the USA, Europe and all the developed countries of the world, but despite the wholesale destruction of human life, nobody seems unduly perturbed. If, however, you find this information disconcerting, here is the good news. . . . The causes of all diseases are now sufficiently understood for them to be easily avoided, and in most cases, reversed.

Much of this recent information. is unknown still to most doctors, who have been trained in the conventional ways of medicine. Many open-minded doctors are accepting the concepts enthusiastically as they see them proven.

The essential message is that all diseases are easily avoidable and in most cases curable, by rectifying improper diet and other living habits. The vital key for long life is a clean bloodstream containing adequate oxygen, and upon this concept is based this entire book. I have collated a great number of facts together with the opinions and conclusions of many highly respected medical researchers. The subject is not difficult to understand and you can draw your own conclusions.

## CHAPTER ONE

# LONGEVITY

*"The art of living consists of dying young, but as late as possible."*  
Anon.

How long do you wish to live? Many a man has answered that his ambition is to be shot at 90 by a jealous husband. That reply may be good for a laugh but perhaps that ambition is not, after all, beyond reason. There are some pretty remarkable cases of longevity on record, some people live to 110 years or more. However, some apparently healthy folk don't make 50.

Why did my old mate, Algy Virtue, die of a heart attack at 52, but at the age of 117, Leliai Omar Bin Datuk Panglima. of Malaysia could cycle 43 kilometres to marry his 40-year-old lover who is his 18th wife?

You cannot put it down to luck, there has got to be a reason. Genetics? Long life seems to run in some families, but does short life run in others? Perhaps, but it is hard to accept a variation of 100% or more as attributable to genetic factors.

When high-quality machines break down, rarely is the breakdown the result of defective design or defective components. A motor car, carefully maintained and driven, will last for hundreds of thousands of miles. Yet many cars break down because of dirty ignition wires or distributor points and suffer early wear because of clogged filters and dirty oil. The car body may even look shiny and new but its vital mechanical components have been ruined by bad driving and poor maintenance.

Just as a reason can be found to explain the long life of one machine or the short life of another, so must there be reasons, perhaps just as simple, for different human life spans. Many researchers have spent their lives studying the subject.

Most medical researchers have been investigating the causes of degenerative diseases, the most common reason for people dying young. Others have investigated the factors governing longevity, how to explain the vigor of Leliai Omar Bin Datuk Panglima and others like him. Khfaf Lasuria, 130 years old, a lady from Abkhazia in the U.S.S.R., was still a tea picker at 100 and still smoked a pack of cigarettes a day; Miguel Carpio of Vilcabamba, a farmer, was still active at 123.

Dr Alexander Leaf of the USA visited these people to find the secret of their longevity. Many of these people in remote areas who claim great age cannot prove it and some of them in Russia are suspected of having assumed their fathers' identities years ago to avoid military service. But in Vilcabamba, proper church records substantiate the ages of people there, and in the two other countries visited by Dr Leaf, Hunza and Russia, he found sufficient evidence to convince him that many claims were substantially correct. His study was described in the *National Geographic*, January 1973, and later in his book *Youth in Old Age*.

Dr Leaf was impressed by the simple diets and vigorous activity of these old people, who were merely following the lifestyle in which they had been reared, and who accepted long life as normal. Like most people, they accepted their lot as it comes, never querying the whys and wherefores of lifespans short or long.



in California, Mrs Eula Weaver, at 81, although crippled with heart disease and arthritis, would be considered by most people to be doing quite well by American standards. However, fortunately for her, in nearby Santa Barbara a researcher had the whys and wherefores just about figured out, and by following his advice Mrs Weaver rejuvenated. At 85 she could run a mile, and at 90 she was still able to run a mile every day. Her story is told in the next chapter. The story of her benefactor, Nathan Pritikin, is told in Chapter 3.

The reason, as it turns out, for the tremendous variation in human lifespan is not all that different to the analogy made to motor cars. When correct maintenance is adopted, the deterioration ceases--even better, the machinery of the body is so infinitely wonderful that it cleans and actually repairs itself.

On lifespans, Dr Hans Selye in his book, *The Stress of Life*, has this to say: "What makes me so certain that the natural human lifespan is far in excess of the actual one is this. Among all my autopsies (and I have performed over 1000), I have never seen a person who died of old age. In fact, I do not think that anyone has ever died of old age yet.

"We invariably die because one vital part has worn out too early in proportion to the rest of the body."

The biblical edict that man's allotted span is "threescore years and ten" is generally accepted as par for the course, and indeed it is. However, as we proceed with our investigation, it will be seen that this allotted span applies only to those who transgress the laws of Nature. Indeed, if you correct your lifestyle, you can abandon the threescore years and ten" concept and leave it to those who cannot escape their mental blocks. The allotted span, if there is one, is more than a century, and you can make it.\* We do not degenerate because we grow old, we grow old because we degenerate . . .

\*The Bible: Genesis VII, 3. "And the Lord said, My spirit shall not always strive with man, for that he also is flesh: yet his days shall be an hundred and twenty years."

## Man, 73, a 'youth' again

AVIS (California). Saturday.--a 73-year old man has "rejuvenated himself" with proper eating, drinking and exercise and can run a 6.5 minute mile.

Noel Johnson's formula is "stop eating and get out and run."

Dr Jack Wilmore, a physiologist, recently completed a series of physical fitness tests on the retired aerospace worker at the University of California.

Dr Wilmore reported: "This man is a superman for his age."

Mr Johnson began a weight-reducing program three years ago because he felt "generally lousy."

He lost 40 lb and started serious training last year.

Now he runs 150 miles a week and eats a dozen times a day but never very much and

seldom meat.

"I might have a handful of dandelion greens, alfalfa, lemon leaves, raisins or dates," he said. "These are endurance foods--never a large meal."

During the tests, Mr Johnson ran briskly on a treadmill for nine minutes, and hardly panted afterwards.

*Sun-Herald*, October 24, 1971

## CHAPTER 2

# LIVING PROOF

*"There are two ways of moving men, interest and fear."*  
Napoleon

The knowledge contained in this book I acquired over a period of about twenty years. I had at first no specific interest in health, I took it for granted along with steak and onions, and apple pie and cream. It was my wife's indifferent health and later on, the heart attacks (at age 42) of two of my pilot contemporaries, that got me thinking.

The living proof described in this chapter are real people who have side-stepped Algy Virtue's fate in the nick of time and who are healthy and vigorous again. Their introduction now is intended to stimulate the readers' interest ahead of the chapters which may tend to generate a little fear.

Bear in mind that for each of these Sydney people quoted in this Chapter, there are a thousand in the USA, all documented.\*

\* Since the first printing of *The Health Revolution* in 1981, the author has accumulated sufficient testimonial letters to fill this entire book. The letters describe recoveries from every common metabolic disease, including cancer and MS. Cases of heart disease, claudication, diabetes and arthritis comprise most of the letters because not only are these complaints the most common, they are also the most easily corrected.

My wife Joan had never been in very good health--she smoked, drank coffee, took aspirin for frequent headaches, sometimes migraine, had bouts of asthma and over a period of maybe twenty years had lots of doctors' consultations, lots of medicine.

I became interested in nutrition when I realized the medical system was virtually useless, and so began to read all the books I could find on the subject of nutrition and health. I realize now that a lot of them arrived at false conclusions and gave wrong advice, but all helped, some more than others.

After her first close call with diverticulitis, and recovery with the benefit of a long stay at the Hopewood Health Center,\* my wife's bad habits were resumed and it was evident she was heading for worse trouble. In June 1975 she had a massive heart attack. With the help of a temporary pacemaker and weeks in intensive care, she eventually made it home again.

\* The Hopewood Health Center at Waliacia, N.S.W. has been established for many years and has been successful in restoring many people to health using a vegetarian diet regimen. More recently established, the Hippocrates Health Centre at Mudgeeraba, Queensland, is achieving some success.

Now people in this position should realize that because they let you come home does not mean the heart disease has gone away. Unless you follow a strict lifestyle the condition will worsen and your life expectancy will be short. This happened to her and for a second time she very nearly died. She had five return visits to hospital without, fortunately, any further permanent damage.

As these repetitions could have had but one inevitable result, I arranged for Joan to undergo a series of thorough tests at Prince Henry Hospital, which included an angiogram,\* to assess her capability to exercise. I had in mind Dr John Scaff, a cardiologist of Honolulu. I had met Dr Scaff through Dr Kenneth

Cooper (author of Aerobics) and knew that he had trained 25 of his heart attack patients to run in the Rimmer Pacific Marathon (26 miles) in December 1974.

\*An angiogram is an x-ray study of the arteries of the heart or of arteries elsewhere in the body.

The test disclosed--

"it shows, as expected, that she has a complete blockage of her right coronary artery and of her left anterior descending branch of the left coronary artery. There is, moreover, a severe lesion in the circumflex artery. Thus she has triple vessel disease, and in addition, an area of anterior infarction with aneurysm formation."

Surgery was considered but ruled out because the arteries were too bad. Then she got so bad she could only walk a few feet and was constantly near collapse. Her heart was missing every third or fourth beat.

Standing on the front lawn that morning after his emergency call, her doctor told me she was dying. It was pretty obvious. So once again into coronary care. This was in July 1976, a month I shall never forget.

Dr Scaff, by this time, had the report. I phoned him in Honolulu. He said she was dying and that he could not help her but he could arrange surgery there (\$15,000 just for the operation). She couldn't even have made the flight and I felt it was the end for her.

I had a cutting of a newspaper report (*Sydney Sun*, December 10, 1975, page 106) about spectacular recoveries achieved in such cases by the treatment at the Longevity Research Institute in Santa Barbara, California, but I thought I was already using their system.

I was carefully supervising her diet as well as I could and she was eating no meat or dairy products, no sugar, no salt. I figured I had it all right and ensured that she consumed plenty of polyunsaturated vegetable oil, as recommended by the National Heart Foundation, the best and most expensive cold-pressed variety.

But I was wrong, I got up one morning and dug the clipping out of my files and read it carefully. And there it was right before my eyes . . . "the diet calls for a reduction of fat intake both saturated AND UNSATURATED to 10%". The penny dropped like a ton of bricks, I grabbed the phone and with the special help of the international operators found myself within a few minutes talking to Nathan Pritikin in Santa Barbara. I did not know who he was, his name had not even been mentioned in the news report.

I told him the situation and read the physician's report to him. His reply was clear and direct. "Yes, we can help you, we have had a great deal of success with patients in this condition." His calm manner of speech as he quickly briefed me filled me with confidence. The confidence was not misplaced.

I proceeded straight to the Prince Henry Hospital, explained to Professor Wilcken, the senior physician, what had to be done and he cooperated instantly by calling the dietician. I sat on the end of my wife's bed and wrote out her meal schedule on the spot. The dietician, a young lady, scanned the menu and said, "What about protein?" but did not protest, so the program was started.

**THE VITAL POINT OF THE TREATMENT IS TO ENDEAVOUR\* TO ELIMINATE ALL FATS AND CHOLESTEROL FROM THE DIET, SATURATED OR POLYUNSATURATED, IN ANY FORM AT ALL. ALSO SUGAR, SWEETS, SALT, COFFEE (SHE WAS ALREADY OFF THESE). SHE WAS TO WALK AS MUCH AS SHE FELT ABLE. (See Chapter 14.)**

\*Small amounts of essential fats are necessary in any diet. Natural foods contain adequate amounts of protein and essential fats, and it is almost impossible to reduce these components below a safe level.

So she was put on this diet forthwith at the hospital and the improvement was virtually instantaneous. In three days she was walking all over the place. In a few more days her exercise routine commenced on the exercise bicycle, a few minutes at a time.

Two weeks later she was doing 10 minutes, twice a day and was soon allowed to come home. That was

in 1976. She is now living a normal life; drives a car etc., and, glad to be alive, is being more prudent at this time. Incidentally, she can read clear type now without glasses, which she had not been able to do for years.

Tests conducted in August 1977 again at Prince Henry by Professor Wilcken disclosed:

"On examination there were no signs of cardiac failure, her blood pressure was normal and, interestingly enough the apical systolic murmur which was quite prominent when I last listened to her was no longer audible.

"I think this does indicate some improvement in ventricular function and perhaps posterior papillary muscle function. The ECG is pretty much as before as one might expect but the echo we did, I think, is consistent with some marginal improvement. The posterior wall moves a little better than previously although it is clearly impaired in its movement. The septum is fairly flat--not moving much at all really."

Here, in their own words, are the stories of some other people right here in Sydney, Australia, who have made dramatic recoveries.

### **Ted Clifton, journalist and author, aged 74**

"Whilst gardening at home one Saturday in September 1976 I suddenly felt waves of nausea and then collapsed on the grass. I managed to stagger inside and fell on my bed. My wife called the doctor who took one look and sent for the ambulance. I had had a heart attack.

"Lying in intensive care in Royal North Shore Hospital, I was covered with wires and tubes and I could see what looked like TV screens with lights moving across them. Time had no meaning, except I knew Sunday was Fathers' Day and I felt a rush of tears and self pity. After some days I was moved into another ward with three other patients, a taxi owner an architect and a farmer.

"When I had recovered sufficiently to return home I decided to have a complete check-up at the Aerobics Center. I failed the stress ECG and my blood tests were bad, but whilst there I happened to meet Ross Horne, and this meeting changed my life. Ross spoke convincingly and gave me great encouragement; I decided to follow his advice.

"I adopted the Pritikin diet and commenced a walking program. A friend of Ross, Marlene Pentecost (author of *Cooking For Your Life*) provided my wife with cooking recipes and advice. Ross was my chief instructor who, although a busy man as a senior Qantas pilot, always found time to advise me.

"Since embracing the program I have felt uplifted in spirit and my health has improved steadily. In summer I swim 30 laps of my pool. I have found again the desire to work and help others. I have resumed writing and apart from magazine articles, have just written a book. The book is my life story, and I've called it *Take It Easy*.

### **Pam Pritchard, housewife and businesswoman, aged 45**

"Dear Ross, I'd like to say how excited I felt after reading your book. I wish it had been available 18 months ago when I was so desperately searching for an answer to my illness.

"Briefly, after a number of stressful years, in the early part of 1980 I discovered a lump in my breast. Six months later I had a biopsy, the results [of] which proved [it] to be malignant. Believing cancer to be a fatal disease, I was devastated.

"The following weeks placed me in great turmoil, thinking I had no other choice but surgery. At this time I was living on Magnetic Island and a dear friend gave me two books to read--Edie May's *How I Cured Breast Cancer Naturally* and Max Gerson's *A Cancer Therapy, The Results of Fifty Cases*.

"I started thinking maybe--just maybe--there was an alternative to conventional medicine. In face of

opposition from the doctors and my family I decided to pursue the methods outlined in these books. Refusing surgery, I started on a natural raw vegetarian diet, exercising and swimming in the sunlight and fresh air.

"I started feeling better and became aware that my previous eating and living habits had been completely wrong.

"Six months later I returned to my family in Sydney and because of their concern, I had another medical examination. Extensive tests revealed no cancer. Not convinced, the doctors pressed me to have chemotherapy and radiotherapy.

"Feeling confused because of opposition from my family and the medicos to what I knew was right, I was introduced to you at just the right time. You were able to reinforce my convictions and more. Your encouragement and support has been wonderful and I cannot sing your praises enough. I know your book is an answer to all disease and hopefully people like myself will find a new way of life through you.

"Something which could have been devastating has changed my whole way of life for the better. May God bless you and again thank you for your personal help and encouragement. I now run my own business and have never felt better."

### **Vic Roby, Western Australia**

"You may remember my writing to you in January of this year, relating briefly my history as regards my triglycerides and cholesterol levels, and how, since reading your *Health Revolution* book, my triglycerides and cholesterol levels have for the first time in the eight or nine years since I first had them checked (and found them to be raised quite high), been lowered to "normal", thanks to the Pritikin diet and you. My latest blood test result is even better showing my triglycerides at 1.5 and the cholesterol at 3.6.

"My main reason for writing to you again is to tell you about my father-in-law who lives in England, he is 58 years old, totally blind and has only one leg (the result of an explosion at age 14). Before Christmas 1982, he wrote to tell us that he was suffering from angina, and then at the end of January 1983, he informed us that because he could now only walk about 20 feet before suffering a severe angina "attack", and because his general condition had worsened, he would be undergoing a triple by-pass operation on March 11th this year. He was obviously very worried about his prospects, so I talked to him at length on the telephone about the Pritikin diet and also purchased another copy of your *Health Revolution* book and sent it to him.

"On receipt of the book his wife read it to him, and also re-read all the relevant parts on triple by-pass operations etc. He immediately put himself 100% on the diet and exercise plan, and set about curing himself.

"One week before his date for the operation, he was walking all over the place, his angina pains non-existent and he felt so much better all over, and so requested another angiogram which showed his atherosclerosis reversing. The surgeon said he didn't know why this was and also said the condition would probably stop reversing soon and continue deteriorating again. He also said (when told by my father-in-law about the Pritikin diet being responsible for his getting better) that one should ignore such 'fad diets', and even if somehow the diet did reverse my father-in-law's condition, he would never be able to walk more than two miles. Well, he's already proved the surgeon wrong on that count as well!

"Anyway, the surgeon agreed that the operation no longer appeared necessary and was therefore cancelled; another success for the Pritikin diet.

"I got into conversation with a stranger in my local library some time in January; he was due to have his gallstones removed and was searching for a suitable diet to go on after the operation, but after introducing him to your book, he took my name and phone number and off he went, proclaiming that he was going to tell his doctor that he would not be having the operation until he had given the Pritikin diet a chance first.

"Two weeks ago, I received a telephone call from him informing me that he didn't have the operation, and a subsequent examination and tests have shown that his gallstones have almost completely dissolved.

"A lady friend of my wife has, since the age of puberty, experienced a heavy loss of blood during her period as well as premenstrual tension, but since going about 80% on the diet, she experiences no premenstrual tension and hardly any blood loss.

"After previously attempting to ridicule me because of my weight loss, workmates are now beginning to realize that what I have been telling them recently makes sense. In fact, now six are 100% on the diet and about another eight are partly on it, which probably explains why none of the Perth or suburban book shops have any copies, or can't obtain any copies of the *Health Revolution*, and also most libraries have a waiting list for it.

"I don't know if you are aware of it or not but on April 3rd, 1983, in Western Australia's *Sunday Independent*, there appeared an article about a man named Graeme Prosser who had cancer of the prostate and a tumor covering the lower third of his bladder. The article mentioned Mr Prosser reading your book and now, after he and his family followed its strict guidelines, it described how his monthly biopsy finds him completely free from cancer.

"Congratulations, Ross!"

### **"The miracle of nature cure"-- newsletter of the Natural Health Society of South Australia**

The following is a case history of NHS member, Trevor Green of Sydney. It is so wonderful that the message must be broadcast loud and clear!

"Eighteen months ago I received the news that I had triple artery disease--right descending artery blocked, left descending artery 70% closed, and the third smaller artery 30% closed. The surgeon I was consulting confirmed that open heart surgery was desirable and that if I did not have it the chances of having a third heart attack were real in the next five years and that it could be fatal. At that time I had just heard about the Pritikin Program which is as you know, a health program similar to the ideals of NHS with the exception of oils and fats not being part of the diet. I had read Ross Home's book, *The Health Revolution*, with great interest because he had made the statement in the book that if a person followed the regression diet (stricter version) for two years, arteries of the heart would be largely cleared of lesions. The surgeon politely ridiculed this concept when I discussed it with him and replied to my cardiologist that 'I had vocalized false expectations' as to diet.

"All this was a tremendous shock to me. I wrote to Ross Horne who replied simply that if I followed the diet assiduously 'I would not need an operation'. The problem was whether to be safe, as it were, and have the operation, or take a chance for the two years and see if the diet would work. I am now halfway through the two-year test period and my cardiologist can see that I am doing well under the diet, though he is reserved about its ability to regress heart lesions once formed.

"Unexpectedly, he wrote to me about going into the Prince Alfred Hospital as part of a research program. This involved a two-day stay linked up to a heart catheter and an intensive series of exercises, some under certain drugs, some without. I must add I was somewhat apprehensive about having tests which contained a risk factor since you are exercised to exhaustion point, and one wonders just how much exhaustion a defective heart can take! However, I went in with the hope that my contribution might be helpful to somebody else and consoled myself with the expressed sentiments of the hospital cardiologist that 'if anything goes wrong I know what to do!'

"Well, I can tell you with much gladness that not only was I an ideal guinea pig for the purpose of the research project, but also that my heart performance was considered little short of amazing by the cardiologist. At the conclusion of the two days he said to me--'we exercised you to exhaustion point (ie, my legs gave out on the cycle machine--a device like a dentist's chair tilted back with pedals at the base

where one is strapped in with many wires strapped to the body) and there was no sign of failure in the cardiograph'. He then added words which were music to my ears . . . 'If I were you I would not have the operation'. Another matter which caused them surprise during the tests was the high amount of oxygen in the blood--so good was the oxygen level that it showed up on the test equipment that I was being administered oxygen.

"All these marvellous results are due to changing to the natural health regimen, eliminating red meat entirely, and most other meat as well. Of course, I have a long, long way to go yet, but the balance between the need for surgery is now on the negative side and this in only 12 months of application, though I must say, assiduous application. A much more telling result will be when I have a second angiogram--dye released into the heart arteries which is then photographed and shows precisely the position and extent of blockages. This will be in about one year's time. My cardiologist says if there is any significant result he will write it up in the Medical Journal."

Two years have passed since this letter was written and Trevor reports continual improvement. Due to change of location he has a different cardiologist who considers Trevor to be "unique". No further tests are considered necessary and the cardiologist said not to come back for at least two years.

### **Roslyn Allen, schoolteacher, aged 32**

*Written by her fiance, Sean Hanrahan, Editor, Southern Cross Newspaper, Victoria.*

"Roslyn became a high school teacher three years ago after working hard at night school to matriculate and then three years of university. Together we drank a bit and generally burned the candle at both ends.

"For some time Roslyn had experienced numbness and tingling in her limbs and at first put it down to the cold weather. These symptoms progressively worsened and were medically diagnosed as multiple sclerosis in December 1980.

"By February the situation was disastrous; she had symptoms everywhere in her body, she was suffering extreme fatigue and depression and she was so tired in the evening she had to go to bed at 6 p.m. The doctors said that nothing could be done and that it may be advisable to move closer to the hospital and to come back whenever it got bad. Expecting to become confined to a wheelchair, she advised me to leave her as she did not wish to be a dead weight in my life.

"About ten weeks ago, dissatisfied with the medical advice, we commenced investigating alternative forms of treatment and read two interesting books on MS--J.C. Ogilvie's *Overcoming Multiple Sclerosis* and W. Richie Russell's *Multiple Sclerosis--Control of the Disease*. Following the dietary advice of the former book, after about two weeks Roslyn started to improve significantly. Then we read your interpretation of the MS process and were so impressed we both immediately adopted the Pritikin Program.

"Roslyn's recovery was noticeably accelerated, and now all symptoms of MS have gone except slightly in her right hand. She looks years younger, and in her own words she has more energy now than ever before in her life; her spirits are soaring.

"For my part I have lost 21 pounds and feel great. We plan to marry at the end of the year."

### **Neil Moore, garage proprietor, aged 44**

"I had never been sick in my life and never gave a thought to my health or my diet. I just took such things for granted. I ate the ordinary food--packaged cereal with milk and sugar, bacon, eggs, etc. for breakfast. For lunch I'd have some sort of take-away food, maybe fried chicken, pies or suchlike. And in the evening a good home-cooked meal, maybe a grill or a roast.



"Running my service station kept me busy, but I really had no worries at all.

"One thing I noticed however, was that in winter I caught colds, and with each year the colds were worse and lasted longer. Another thing was that I started getting headaches, usually after a hard day, sometimes in the afternoon, and they were becoming worse and more frequent. In fact about a year ago I was getting a headache, which I called a sinus headache, just about every single evening. Looking back, I remember an occasional chest pain which I ignored as a minor inconvenience and which never persisted.

"Then in August of 1978 I had a heart attack. I'd just started work when I felt this pain in my left shoulder which gradually spread across my chest. I went home and my wife had gone out, so I just lay down on the bed. The pain kept up all day and when my wife returned home she called the doctor who promptly diagnosed the problem and straight away into the Coronary Care Ward of Mona Vale Hospital I went.

"After a couple of weeks, I still had some shoulder pain, but I told the doctor I was pain-free in order to be allowed home. My local doctor gave me pills to help me with the pain and I just rested at home.

"One of my customers, Ross Horne, called up to see me and proceeded to expound a pretty convincing explanation for what had befallen me, and with my wife listening, he described what he called 'The Pritikin Program'. It sounded good, so we tried it. That was in September.

"In a couple of days my angina had gone and so had my headaches, and I started to do a bit of light work about the place. A day or two later I started back to work, taking things easy but sticking to the Pritikin diet. I haven't followed a planned exercise program, but I do a bit of walking and jogging occasionally.

"And now that's two years ago. I'm down about 30 pounds in weight over that time, am free of headaches and with the winter almost over I haven't had one cold.

"I reckon I'm back in business in more ways than one."

### **Jean Halewyn, real estate saleswoman, aged 52**

"Dear Ross, I shall go back to the day when you stood on my doorstep and I was almost ready to throw in the towel. I am writing this letter as I thought it may help others, through you, who find themselves in the same boat. I don't think I ever told you the full story, so here I go.

"When I met you, every joint in my body was inflamed. Walking and carrying things, getting up and sitting down had become a major problem. The severe pain and the savage damage done to my body had taken their toll. My once slim fingers were staring at me like overboiled sausages, feet, toes turned under or sideways, were too sore to bear shoes on them. I hid all that away from you with the floating thing I wore, my hands hidden in the pockets . . . rheumatoid arthritis . . .

"The whole thing started in 1973 after a traumatic event in my life and by 1976 was severe. I could no longer work, I was on cortisone, clinorils and digesics, my ESR rate was 113.

"Some days I could not move at all, other days--well, I could get around the bends. I crawled around the place, fighting with the taps or contemplating how the hell I was going to get off the toilet seat. I could no longer have a bath as there was no way I'd ever get out of it. To dry my back was almost an impossible job. You see, your shoulders do not let you swing your arms about. I had physiotherapy twice a week etc. etc.

"I had read about gadgets around the house to help sufferers such as myself, things to put on taps, things to help you dress, undress, get out of chairs, even gadgets to help you put on your stockings. I think this was the most devastating part of it all; to realise that I needed those things as I no longer coped. I wept a lot, my disposition became horrid and I was not a joy to have about. I became a complete loner, ready to give up the ghost. The prospect of having to live my life out as an invalid did not turn me on.

"It was at this point that I met you. I think, looking back at it all, it was a combination of two things;

your enthusiasm about nutrition, your conviction about the Pritikin diet, the remarkable story about your wife, the case histories you quoted to me, and my own desperation, which convinced me to have a go at the very stringent diet sheet.

"I must admit, it is not an easy thing to stick to, but improvements become apparent after a few weeks. I lost a great deal of weight and this allowed me to walk small distances, shuffling along in my slippers on the beach, slowly, slowly. Parts of me that had not worked for so long slowly started to operate again. I did not fall flat on my face going uphill, because my ankles actually began to bend again. Ross, you have no idea what that meant. And then my knees followed, my hips, my shoulders began to come unstuck, I could raise my arms above my head. This sounds idiotic to a normal person, but believe me, anyone with this thing knows what I am talking about. Swimming! Marvellous. Hydrotherapy, great if you can get up and get yourself there. That came first. I tried to get to water somehow, as I found the loss of body weight gave me the marvellous feeling that I could move.

"So what I am trying to tell you is that I am almost my old self again. I am back at work again, at full capacity.

"The thing is not fully cured, Ross, but I am very mobile. I walk three miles per day, wear shoes again (you have no idea what that meant to me). My spirits once more are soaring high. My morale is great. I can handle the days when I am sore. Anger, upset, eating and drinking the wrong things will all help to throw you back. I know smoking is bad and you will be annoyed that I haven't stopped, but at least I've cut down on it.

"It may sound crazy, Ross, but I have learned that our body is not only the temple of the soul, but the most amazing bit of machinery. Feed it the wrong thing and you will end up like a neglected car. I am amazed by the fact that most of me had seized up--yet now I am working again. To be useless and a burden to other people would have destroyed me; that probably makes me a coward. However, I thank God for sending you along so many months ago. It is a tedious road, your diet, no smoking, no drinking, my body and myself--we are grateful."

### **Elizabeth May Doolin, pensioner, aged 75**

"Dear Captain Horne, I received your last books yesterday and thank you very much for them. I owe you a debt of gratitude for saving my life. I would of been in my grave now if I had not changed doctors and then started on your diet. I was being treated for kidneys.

"In hospital, it was a battle to get temperature down. I had convulsions, nosebleeds etc. When home I was getting worse--could not walk and was not able to stand to press my slacks to go to the doctor. When I complained I was told 'Just sit around in a chair'. Ironing was out. So changed doctor. He took blood tests, ECG, urine test and said it was heart and a pacemaker was needed.

"As I am a war widow I came under Repat and arrangements had to be made. Someone on television recommended a clove of garlic a day as it was a pick-up for the heart, so I started taking it. Then, going through old papers I had kept, came on your *Daily Mirror* writing and so started on the Pritikin diet. It was when I went to the doctor to find out what was to be done about the heart-pacer. When he examined me he said 'There is a change, something is working'. Asked what I had been doing and what medicine. I told him that I was eating garlic every day and about the Pritikin diet. The doctor said go on as you are going and he would see me in a few days. Next visit he was very pleased but told me not to try and lose weight as the body was too weak.

"He is very pleased with me now. Never had any colds in the winter, can go shopping. Going back every week to the Community Center. Doing most of the cooking for the family, get up at about 8.30 a.m., sometimes earlier. Go all day and as my daughter and husband are cleaners and work at night I cook their tea and am lucky to be in bed by 2 a.m. I walk some distance and know my limits. If I have a busy day I get very tired and make the next day easy.

"My doctor is very interested in the Pritikin diet plan. My tablets have been cut down and I have not taken garlic for a while. It was a real pick-up for me. It used to make the pulse beat better.

"I am 75 years and feeling well again. I thank you and hope that you will live to enjoy life, also your wife. May God bless you."

**Peter McLarty, 39, managing director of  
large engineering company, Western Australia**

"On New Year's Eve 1980 I was informed by my family doctor that the blood test I had taken the day before indicated leukemia. Further tests the following day at Royal Perth Hospital confirmed I had Hairy Cell Leukemia and that my spleen was grossly enlarged.

"The medical specialist recommended immediate removal of the spleen as the only course of treatment available for this disease. After considerable discussion and thought I reluctantly agreed, and so the operation was performed on January 8, 1981.

"After the operation blood cell and platelet counts returned to normal but although the Hairy Leukemia Cells were no longer present in the blood, they continued to be numerous in the bone marrow.

"The specialist advised that no more medical treatment existed. His advice was to wait until the Hairy Leukemia Cells overpowered the bone marrow and prevented the production of blood cells, at which stage (in an expected 18-24 months) chemotherapy would be tried. However, he was not optimistic about the chemotherapy as it had always failed in the past. He offered no other advice but he specifically warned against an organic diet as a useless waste of effort because no benefits could be expected from its use.

"As a positive thinker, I refused to accept this attitude; I believed I had caused the problem and I believed therefore that I could fix it.

"I suspected that my condition was a result of unrelenting stress over a long period of time, and this stress, combined with my traditional Australian diet, was perhaps the cause of my problem.

"I immediately began to discover all I could about Hairy Cell Leukemia and began also to be concerned about the overall state of my body. I frequented the medical libraries of local hospitals, I researched all the medical computer data banks and I read every medical article on the disease. At the same time I began to walk ever increasing distances each day.

"Reading the first medical journal article was a traumatic experience. Sitting in the Fremantle Hospital medical library with tears streaming down my face I gained a chilling knowledge of the survival rate for my disease. Chemotherapy was a total failure. Patients were reduced to a series of numbers, their survival time plotted in months, and few months at that.

"Only one medical paper gave a clue that provided encouragement. It was a South African medical journal and it gave the history of one individual patient with Hairy Cell Leukemia who for no apparent reason had, over a number of years, eliminated all signs of the disease.

"This was all the encouragement I needed. If it could happen to that one person, then it would happen for me also.

"A friend introduced me to a Christian Brother who had contracted melanoma seven years earlier. After being told he would survive only a few months, Brother John Mann adopted the strict vegetarian way of life and recovered his health. After hearing his story and speaking with others, I became a strict vegetarian in February 1981.

"I planned my diet methodically. The first stage was to produce a cleansing process to restore my body to an alkaline chemistry condition. For one week I ate grapes only, every two hours during the day. Stage

two consisted of vegetable purée every three hours and the third stage, the mainstay of the diet regimen, consisted of fresh salads, almonds and fruit, together with frequent fresh vegetable juices. After a few months I allowed myself some steamed vegetables as well.

"Tests over the next 12 months showed no leukemia cells in the blood, but still signs of them in the bone marrow. However, after 15 months, a bone marrow test at the M. D. Anderson Hospital, Houston, Texas, showed completely clear.

"Having experienced natural healing for myself, reading books about it and talking with others who have been naturally healed of various complaints, I am convinced that diet is the answer to all modern diseases. Diet combined with a worry-free, relaxed mental state, provides the answer to any chronic medical condition. The problem is our so-called modern society cannot accept something so simple.

"Because other people helped me, I have tried to assist anyone who may be in the state of medical limbo that I experienced. It is difficult for anyone in fair health to adopt the strict vegetarian way of life, even though they may accept the logic of it. But when the time arrives--when they become desperately sick -it is really very easy, and it works.

"IT IS THAT SIMPLE.

"Ross, good luck."

### **Rolet de Castella, 60, business executive and father of world champion marathon runner, Robert de Castella**

"At midday on Sunday, May 27, 1974, I sat down to lunch after a 10 mile run in the Dandenong hills. The day before I had run a five mile cross country race at a performance level good for my age of 50 years. I was very fit, having participated in this sport for many years.

"With my meal in front of me, I suddenly found I could not move my arms to eat it, and I was unable to speak. I was having a stroke. I was taken by ambulance to hospital where my blood pressure was recorded at the frightening level of 300/140.

"After a night of intensive care in St Vincents Hospital my blood pressure was reduced with the aid of drugs and I regained my speech and movement. Two days later I had an exercise stress ECG which disclosed I had advanced coronary artery disease and was at high risk for a heart attack. I was placed on medication to control my blood pressure and was warned against any further strenuous exercise.

"After the scare I continued to run each morning at a much reduced pace, afraid of another blood pressure excursion. After about six months however, I began to experience severe angina pain when running, after covering about two miles. As time went by the pain would come on sooner and its severity increased.

"On the morning of March 7, 1975, I awoke with a severe pain in my chest, so bad that I could not even consider a morning run. I phoned my doctor and got myself to his surgery. The doctor diagnosed a heart attack and said I should give up running altogether. He arranged a coronary angiogram to determine the extent of the blockage in the coronary arteries and when this was done about a month later, it disclosed that the left coronary artery was totally blocked with varying degrees of closure in the other arteries. Despite this condition there was still sufficient circulation to the heart muscle, so in that sense I had been lucky.

"I was told that from now on I would have to live on a much higher dosage of drugs to control my blood pressure and to minimize the angina pain which was brought on by the least exertion. I was told a coronary bypass operation was not immediately necessary but could be carried out if my condition further deteriorated. I was not to run and not to lift anything heavy.

"I continued with my ordinary diet which, following the advice of the National Heart Foundation, contained polyunsaturated fats in the form of safflower and maize oil and margarine instead of butter, with reduced intake of animal fats from meat and dairy products. I refused however to 'hang up my running shoes', and a couple of months after my heart attack I recommenced running between two-and-a-half and five miles at a very slow pace with the aid of an Anginine tablet under my tongue to subdue the pain.

"Thus I existed uncomfortably, and often painfully, until November 1976 when I read an article on diet in *Runners' World*, written by Nathan Pritikin. I immediately realized the mistake I had been making by using oil and margarine and began to understand what I must do. I realized that by eliminating the harmful substances from the diet, that degenerative diseases could be totally avoided, not to mention the aspect which appealed so much to me, that artery closure could be reversed if the dietary principles were properly implemented.

"So I immediately set about adopting the Pritikin Regression diet and it was not long before I found my running performance was improving. I gradually increased my daily mileage, feeling better and better while using less and less medication, my blood pressure still under control.

"By April 1978 I was running up to 60 miles per week and on May 2, I ran 23-1/2 miles so comfortably I decided to enter the Victorian Marathon Championship. So on June 17, against my doctor's advice and despite warnings of sudden death from arrhythmia, I competed in the 26 miles open event and finished rather painfully in 3 hours 31 minutes 50 seconds.

"From then on I have maintained my new diet, increased my mileage, run more marathons in faster time, feeling stronger all the time. In November 1980 in my tenth marathon, I broke the three hours, finishing in 2 hours 48 minutes 48 seconds. In April this year (1984) I completed my 22nd marathon.

"As a member of the Pritikin Lifestyle association in Victoria, observing the benefits to many others from this "new way" of living, I naturally recommend it to all."

o o o

Immediately following is a reproduction of one page from the original Longevity Research Institute paper titled "Diet and Exercise as a Total Therapeutic Regimen for the Rehabilitation of Patients with Severe Peripheral Vascular Disease". This paper was presented at the 52nd Annual Session of the American Academy of Physical Medicine and Rehabilitation in Atlanta, Georgia, on 19 November 1975, and which originated the *Sun* newspaper report of 10 December 1975 which happily I noticed. A reproduction of this news item is shown at the beginning of this book.

#### **Age as a limiting factor in rehabilitation**

Our study has indicated the promising rehabilitative potential of a diet and activity regimen for claudication patients. That age need not be a limiting factor in rehabilitation is demonstrated by the case of a woman, E.W.: She began, almost 6 years ago at age 81, using the same regimen described in this paper for the experimental group. Her symptoms, like those of the study patients, included other atherosclerotic manifestations besides claudication. Only 5'3 " tall and weighing 100 lbs for the last 40 years, she had developed cardiovascular disease and was treated for angina at age 67. At age 75 she was hospitalized with severe heart attack, and at age 81 had claudication, congestive heart failure, hypertension, angina and arthritis. When she began the regimen at age 81, her claudication limited her walking to 100 feet and even then the calf pain was so disabling she often had to be carried home; and the circulation to her hands was so impaired she wore gloves in the summertime.

Last year, at age 85, and after 4 years on the regimen, she was televised at the Senior Olympics in Irvine, California, where she won 2 gold medals in the half-mile and mile running events. This year, at age 86-1/2, she repeated the runs and now has 4 gold medals. Each morning she runs a mile and rides her stationary bicycle 10-15 miles; twice weekly she works out in a gym; and she follows her diet assiduously. Her systolic pressure is

70 mm.

**Conclusion:**

This combined low-fat diet and exercise approach has proven to be significantly ( $p < .001$ ) more effective in the treatment of severe peripheral atherosclerotic vascular disease than current therapies.

It is hoped that the results reported by the use of this regimen will encourage other investigators to repeat our studies.

Diet and exercise as total therapeutic regime.



Patient E.W. running the mile event  
at the Senior Olympics in Irvine, California.  
E.W. was 85 years old when this run was made.

Nathan Pritikin and a successful case



Nathan Pritikin, founder-director of the Longevity Center, talks with departing patient George Perry. Faced with an angiogram and possible surgery after a heart attack, Perry arrived at the Center in a wheelchair. In a month he was walking 7 miles a day.

### CHAPTER THREE

## NATHAN PRITIKIN

*"Somebody said that it couldn't be done  
But he with a chuckle replied  
That 'maybe it couldn't,' but he would be one  
Who wouldn't say so till he'd tried.  
So he buckled right in with the trace of a grin  
On his face. If he worried he hid it.  
He started to sing as he tackled the thing  
That couldn't be done, and he did it. "*

Edgar A. Guest

By his spectacular success in the rehabilitation of thousands of people suffering from degenerative diseases, Nathan Pritikin in the last eight years has dramatically influenced the entire USA towards awareness of lifestyle and its relationship to health.

The success of this book is largely due to the help and advice he has freely given me, advice that has profoundly improved my life and the lives of my family and many others, and for which I am very grateful.

The Pritikin Research Foundation in California is a professional, dynamic, successful organization.

The 11 original members of the foundation, formed at Long Beach, California in 1972 were professional men who between them represented the sciences of biology, mathematics, electrical engineering, biochemistry, nutrition, organic chemistry, psychology, law, business science, medicine, cosmetic surgery and physics.

The Advisory Board of the present Pritikin Research Foundation comprises fourteen MD's, six PhD's, a dentist, an attorney and the President to the Glenn Foundation for Medical Research, New York. It includes representatives from England, New Zealand and Finland.

Mr Pritikin, the Founder and Director, was born in Chicago, August 29, 1915. Since childhood the fascination and study of the complexities of the human body has been his continued interest. His father wanted him to be a lawyer but he was forced to discontinue his law studies due to the depression. He was interested in electronics and went into business for himself and has ever since been self-employed.

During World War II he was engaged in secret work for the US Government and had access to secret information coming from the European war zone. This information included reports on health status of populations and the effect of continued bombardment and war stress on people. In those days, stress was considered the prime cause of heart disease and Pritikin was astounded to learn that despite the dreadful stress of continued bombing etc., the death rate from heart attacks and other diseases was significantly lower than before.

That the death rate was lowering because of the stringent wartime diet of these people did not fully register with him and he continued his busy life--work, wrong food and no exercise. His interest in medical research continued too and he subscribed to medical papers and journals from all sources. Reading them was his only relaxation, and to find time to study them all and to remain successful in business posed a problem.

This problem he resolved by approaching big corporations as a troubleshooter, and by inventing and patenting equipment for them he was able to rely on royalties as a main source of income. Many of his 43 patents are held by corporations such as General Electric, Honeywell, Corning Glass, Bendix Aviation and General Precision.

In 1957 Pritikin discovered he had a serious heart condition, so bad that he was advised to rest completely. Wherever he went he was to walk no more than a few feet and his wife would, when necessary, drive with him in order to park the car wherever he was going and save him the walk from the parking lot. Realizing that in this situation he had but a short pathetic life expectancy, his inventor's mind looked for an alternative.

Encouraged by the health and diet books by Paul Bragg, he delved into medical research papers on the effects of diet and exercise on laboratory animals, and epidemiological data on human populations.

His blood cholesterol level was tested at 280 mg% (7.7 mm/L), in the "upper normal" range on the accepted standards of the time, so he decided his first step would be to reduce this figure.

There was much speculation and confusion and no proven knowledge or techniques to go on, so Pritikin based his plan on three main facts. Firstly, that heart disease was unknown among native people living on primitive natural diets and that the restricted diets of wartime Europe appeared\* effective in reducing cardiovascular disease. Secondly, that in laboratory tests on dogs where arteries were deliberately blocked, exercise had been shown to create new collateral circulation in the form of new tiny blood vessels. And thirdly, that tests on monkeys demonstrated that cardiovascular disease could be induced, and then reversed, by diet manipulation.



\*See reference to Austrian autopsies, Chapters 14 and 15.

With great caution and thoroughness inspired by dire warnings from the "experts" he embarked on a diet to reduce the cholesterol. Every two weeks he had a blood test checking on 85 different blood constituents, and as his plan progressed he found that all the animal tests were exactly predictive of his own results. No deficiencies occurred and he spent one-and-a-half years to reduce his cholesterol to 160. Cutting out all cholesterol food, in another year, he reduced it to 100 (2.5 mm/L).

Then he commenced the exercise program. He arranged to be checked out to do exercise stress ECG's on himself and used them regularly to monitor his progress. At first at low exertion his E.C.G.\* showed an "ST" segment depression of 2 mm which was very bad. Even at high exertion it would have been very bad, so he started with very short walks, half a block out and back again, four times a day.

\*Electro-cardiogram--sometimes referred to as EKG, described in Chapter 12.

As he gradually proceeded, by the time he was covering two miles a day the ECG started showing improvement. At four miles the ECG showed no depression at a heart rate of 120. Finally, he was running 6-7 miles and arranged for a treadmill stress test to get an ECG at the highest heart rate.

Treadmills were rare items of equipment in 1966, but he located one at the UCSB\* which had been used for testing military personnel. The test was conducted by a cardiologist, a 20 minute test set for a 7 minute mile speed. Every heartbeat was checked for the entire test, his heart rate levelled at 177 beats a minute, and there was no sign of abnormality! Few men of any age can achieve that standard.

\*University of California, Santa Barbara.

And when his eyes began to bother him when reading, he had them checked in order to get new reading glasses. The tests showed his eyes were perfect and that he did not need glasses.

You would have thought that this breakthrough against heart disease would have been world shattering, but to gain acceptance, Pritikin had to persevere against the usual apathy and inertia with unbelievable patience, using his entire resources on a "shoestring" financed venture. The frustration of watching Government research ventures costing billions and achieving nothing, when at one stage he couldn't even raise the last desperate \$10,000 he needed must almost have driven him to distraction.

It was in 1969 that he began to treat Mrs Weaver of Los Angeles, and after other spectacular results with patients from the V. A. Hospital in Los Angeles, was eventually invited to submit a paper at the 52nd Annual Session of the Congress of Rehabilitation Medicine and the 37th Annual Assembly of the American Academy of Physical Medicine and Rehabilitation in Atlanta, Georgia, referred to in the last chapter.

The paper received worldwide publicity and it was the report in the Sydney *Sun* newspaper that I saw that enabled me later to contact Mr Pritikin and save my wife's life.

The interest generated throughout the USA caused Pritikin to postpone a well-earned break and he established the Longevity Center in January 1976.

Prior to opening the Center he was Scientific Advisor for Nutritional Research for the Ampex Bio-Research Institute, California College of Podiatric Medicine, and co-author of the bestseller *Live Longer Now* published by Grosset & Dunlap in 1974. He was also Chairman of the Board of Renco, Inc. and Chairman of the Board of Photronics Inc. He was an Honorary Fellow of the International Academy of Preventive Medicine. His wife, Ilene, supervises diet research and food preparation and demonstrations at the Center and lectures on nutrition.

I first visited Mr Pritikin in August 1976 when, as a Qantas Captain, I flew down as a passenger from San Francisco to Santa Barbara for the day to pay my respects. On that occasion there happened to be seven "grounded" airline captains there as heart patients, having been referred there by the Harvey Watt Insurance Company. They all anticipated regaining flying status and they all did in a short time.

The Center's program consists of a 26-day medically supervised series of examinations, lectures and discussions to provide patients with--

1. An understanding of the causes of degenerative diseases.
2. The role of natural therapy in alleviating disease.
3. The incentive to continue the therapy after returning home.

Some patients had been prospective candidates for by-pass surgery and some already had by-passes which were blocking up. Some were only in their thirties.

The patients are encouraged to walk as much as possible. The atmosphere of the Center is bustling and happy, and even though a lot of the patients find the food not exactly to their taste at first, they appreciate the fact they have a new vigorous future free of drugs and hospitals. Not only can they expect more years of life, but they find they have one or two more hours a day because they need less sleep.

The Longevity Center moved from Santa Barbara to Santa Monica in May 1978. Full records are kept at the Center and are available for inspection at any time. The Loma Linda University's Department of Biostatistics in 1978 presented their evaluation of 893 patients of the Longevity Center up to October 1977. Briefly, they reported these results obtained by the four-week program:

Cholesterol--drugs were eliminated and levels dropped to a mean of 175 mg%. Triglycerides--108 patients in the 200-249 mg% group with a mean of 225 dropped to a new mean of 155. Forty-eight patients with levels of 300-500 with a mean of 373 dropped to a mean of 166. They mean serum triglyceride level in patients above 150 mg% fell by an average of 35%.

Of the 218 confirmed hypertensives on drug medication, 186 left normotensive and drug free. Blood glucose levels fell consistently--diabetic levels from an average of 100.4 93.6mg %. Half of the confirmed non-insulin-using maturity onset diabetic patients left insulin-free with controlled glucose levels. Weight loss of obese patients averaged 13 lbs and of overweight patients (110-119% of ideal weight) averaged 10 lbs. Many other improvements of eyesight, hearing, arthritis, claudication etc. are on record. The President of American Airlines who had already lost a leg because of claudication was one of the patients and was spared the amputation of his other leg.

These results are achieved in only four weeks and the improvements continue when the patients maintain the regimen.

I have visited the Center on a number of occasions, a couple of times to have the original manuscript of this book checked by Mr Pritikin. I attended the Longevity Center's Educational Conference in January, 1978. Over 600 people, mostly doctors, attended and among the speakers were

Senator George McGovern--US Senate.

James Binkenship--Professor of Nutrition, Loma Linda University.

Denis Burkitt MD--St Thomas' Hospital Medical School, London.

James Anderson--Associate Professor, University of Kentucky Medical Center.

Rachmiel Levine MD--Executive Medical Director, City of Hope Medical Center, Duarte, California.

Benjamin Rosen MD--Director Cardiology Dept., Torrance Memorial Hospital Rehabilitation Program, San Pedro, and Assistant Clinical Professor of Medicine, University of Southern California.

Bruno Balke MD--Emeritus Professor, University of Wisconsin, presently Director of Preventive and Rehabilitation Unit, Aspen Clinic, Colorado.

Hugh Trowell MD--Formerly Consultant Physician, Dept. of Medicine and Paediatrics, Makerere University and Uganda Government.

David Abbey PhD--Associate Director, Survey Research Science, Loma Linda University.

Dr Abbey reviewed the analysis of the Longevity Center's 893 patients up to October 1977.

The Conference was held in a theater at Santa Barbara and what impressed me as much as anything else was that Pritikin was the only person on stage who could hear the questions asked from the rear of the theater and how he acted as a relay to the speakers on stage.

The achievements of the Center have been publicized widely in the USA and twice on the CBS nationwide television program, 'Sixty Minutes'. At the end of the CBS review, Dr David Lehr of the Miami Heart Institute, summing up, said that if the Pritikin Program was universally adopted "heart disease would disappear from the face of the Earth".

In January 1977, Dr Robert Wissler of Chicago Medical School addressing the American Heart Association of Modern Concepts of Cardiovascular Therapy, stated that with a cholesterol level of 150 or less, plaque reversal in two years is possible. Since then the American Heart Association on the basis of the Longevity Center's evidence, has modified its dietary recommendations.\*

\*The AHA, the National Cancer Institute and the Diabetic Association currently recommend a reduction of dietary fat to 30% of total calories. This is a pussyfooting move because it has been abundantly clear for years that a far more drastic reduction is required.

In *Circulation*, the official journal of the American Heart Association, September 1977, Dr Nash said-- "There is little question anymore that artery plaque reversal can for the first time be considered possible".

Dr James Anderson, University of Kentucky Medical Center has been using the Pritikin diet for six years successfully in the treatment of diabetes. He states: "With this kind of approach, 80% of all diabetics in this country could be normal within 30 to 90 days".

Dr Floyd Loop, Chief of Cardiovascular Surgery at the Cleveland Clinic, the leading by-pass center in the world, now follows the Pritikin diet himself and refers patients to the Longevity Center.

On March 6, 1978, Mr Pritikin addressed 500 cardiologists at the American College of Cardiology in Anaheim, California, and was enthusiastically received. He has since addressed the American Heart Association and the New York Heart Association.

On January 18, 1980, the Governor of Louisiana, Edwin Edwards, issued an official State Proclamation, January 21, 1980, as PRITIKIN DAY in Louisiana, to celebrate the inauguration of the voluntary community program for better health in the historic town of Natchitoches.

The University of California now has its own Pritikin-style center which is called CHEER (Center for Health Enhancement, Education and Research). More recently the De La Ronde Hospital in Chalmette, Louisiana, has devoted an entire wing of the hospital for the implementation of the Pritikin Program for treatment of patients with degenerative diseases.

Nathan Pritikin's contribution to the civilized world is not that he has discovered anything new. The principles of Natural Health have in the past been discovered and rediscovered over and over again only to be disregarded by the great majority of people, and suppressed by the vested interests of the food industry and the medical and drug industries. Pritikin's vital contribution to the Health Revolution is to have assembled his information in unassailable scientific form and with it to have forcefully penetrated the conservative worlds of publishing, politics and medicine.

### **In requiem--1985**

Unknown to the world, Nathan Pritikin suffered from anemia and leukemia, subsequent to radiation treatment in 1957 for a skin complaint. In the years I had known him I had put his pasty complexion down to constant excessive work indoors, in artificial light.

Late in 1984 his condition, stable for 27 years, began to worsen, and Nathan elected to have experimental medical treatment which led to drastic "complications" including kidney failure and serious liver damage.

To depend on space-age life-support systems for his life was a situation unacceptable to this fiercely independent man, and on February 21, 1985 he decided to take what he considered the correct action under the circumstances, and in the privacy of his hospital room, took his own life by severing veins in his arms.

An autopsy of Nathan's body revealed complete absence of coronary or any other artery disease (see *New England Journal of Medicine*, July 4, 1985). And moreover, up to his death at age 69, Nathan had retained his black hair and the eyesight and hearing of a young boy.

"Many of us will not leave as lasting a memory as Nathan has. The best thing we can do to pay tribute to him is to continue his work."

*William P. Castelli*

*Director, Framingham Heart Study*

*Santa Barbara News-Press--May 1, 1976*

## **Longevity Center's Job**

Editor, News-Press: Since I have been a guest of your beautiful city for nearly a month I have been interested in the comments of readers on the Longevity Rehabilitation Center. As a full paying patient of this center, I with many others am better able to assess the program than are others merely looking in. Other letters have summarized the specifics; I will merely comment on attitudes regarding it which may clarify the thinking of those interested in this vast area of public concern.

The facts demonstrate clearly that few satisfactory answers are in for coping with the curse of degenerative diseases. However, within the last year or two a tremendous stride forward has been made in this direction.

It will be apparent to anyone seeking to avail themselves of the information, that Nathan Pritikin has not conjured this approach to the treatment of degenerative diseases from metaphysical or esoteric sources. Never has the subject been more thoroughly researched. The experimentation and intense scientific scrutiny in the fields of biochemistry, physiology, nutrition, and the areas of rehabilitative, cardiovascular, metabolic, and ischemic phases of medicine have been monumental.

The conclusions are not new; they have

been extant in scientific literature, some of it for decades and longer. For reasons which I will not discuss here, the truth has largely been quiescent. It remained for Nathan Pritikin to coalesce this vast amount of material and exercise the remarkable insight, expertise, and patience to "put it all together".

For this many professional as well as many lay people have already expressed their sincere gratitude. I for one, among many others, am deeply appreciative.

To those who have misgivings as to the authority and implementation of the program, I would inquire, how long must we toy with at best only palliative medical and surgical procedures while our disease worsens, our bypasses fail and our mortality rate increases?

If organized medicine has not been able to put together a package that will give us some real answers to the problem of degenerative diseases by this time, with all the resources and information at our disposal, is it unreasonable to look to other scientific sources that show much evidence of promise?

Sherman S. Devine, MD  
Sacramento  
*Santa Barbara News Press*, May 1, 1976

## CHAPTER FOUR

# THE ENVIRONMENT AND HUMAN SURVIVAL

*"The history of mankind is an immense sea of errors  
in which a few obscure truths may here and there be found."*

Cesare Bonesana Beccaria 1738-1794

### **A sick society\***

Thirty five per cent of Australia's adolescents were handicapped or incapacitated through a variety of physical, psychological and social conditions, according to Professor Peter Eisen.

He said that of the 2,500,000 adolescents in Australia, a quarter would have an obvious physical illness, and 20 per cent would have symptoms of psychological disorder.

Of the latter group, a third had serious psychiatric disorder.

*Manly Daily*, February 2, 1978

### **Half of us sick: Prof.**

Nearly half Australia's working-age adults suffer some chronic physical disease, says Professor Gavin Andrews of the School of Psychiatry at the University of NSW.

"For them, being well consists of managing to avoid the pain, discomfort or disability that so often develops," Mr Andrews said.

*Sunday Telegraph*, December 11, 1977

\*These Australian news reports are indicative of health standards in USA, Great Britain, and the rest of the Western nations.

Modern society has a health problem which we shall now start to analyze. The causes are revealed and the solution is described, at least in regard to degenerative diseases.

As already indicated, it all has to do with people's lifestyles and the resultant interaction with their environment.

There is a great deal of concern about preserving the environment. Many environmentalists are concerned primarily with preserving the natural countryside and the creatures living there. They wish to preserve its beauty and tranquility. Other environmentalists think further ahead about more serious issues, such as depletion of forest areas reducing the oxygen in the envelope of air surrounding the entire Earth, or atmospheric pollution which could result in the melting of the polar ice which would raise the levels of the oceans. These issues affect human survival.

Air pollution in cities is a real hazard that you can actually see and smell. It is a threat to the survival of city dwellers. Motor cars pollute the atmosphere and kill and maim people in accidents, but probably their most drastic effect on the environment is one you cannot see--they deprive people of exercise.

Another change in our environment has been the gradual substitution of "artificial" food for natural food.

These last two factors present a greater immediate threat to human survival than the destruction of forests or the melting of polar ice.

How have these things come about, and what measurable effects have already occurred?

The human race has attained a mental standard which sets it so far above the other animals that people do not think of themselves as animals at all.

The evolutionary process which brought this about is still at work, and the rate at which it works depends upon the degree and the rate at which there is a change in the environment.

Charles Darwin, to whom is credited the Theory of Evolution, coined the term "survival of the fittest". By fittest he meant those creatures who could best survive in a changed environment. With every big change, those that could not cope would perish, but the others (the fittest) would survive, and the breed would be improved. The process is called "natural selection". So generally, when there is no change in the environment there is no evolution. Because the conditions in the oceans have always been stable compared to the conditions on the land, most sea creatures have not changed in many millions of years. On the land, however, severe climatic changes over those millions of years have continually altered the environment. There have been long periods of wet tropical conditions when jungles covered most of the Earth, long periods of fearful drought when jungles turned to desert, ice ages when tropical areas have frozen, and so on. Therefore, on land, new species of animals evolved and others became extinct.

As the primates evolved, no doubt many times must our ancestors have faced extinction. Early man, mainly by virtue of superior intelligence had a great advantage in the struggle for survival, and eventually humans became more and more numerous.

The resultant increased competition for territory and food constituted in itself a significant change in environment. The main threat to survival now came from other men, a situation which still continues.

No wonder the human brain evolved so rapidly within a body remaining virtually unchanged. The survivors had to be of the highest intelligence, using superior weapons and guile. Treachery and cheating are forms of human guile still to be used today by everyone who is desperate enough, and by some as common practice.

Even within an unthreatened community, the superior ones have the advantage in the "mating game", a principle that works in many species of animals to ensure the continuation of the best strain.

Eventually, as humans became smarter, instead of foraging and hunting for food, farming was invented. More people could be supported by a given area of land and the population increased. With a benevolent environment ensuring food supply, individuals had some spare time and began to specialize their talents, and technology commenced. The advent of writing, printing and communications accelerated the process enormously.

Notwithstanding that more technical effort has always been devoted to more efficient ways of killing other men than to anything else, the changes brought about by technology have generally been beneficial overall. So, due to the ideas and inventions of individuals of genius, developed and utilized by the initiative of others, mankind has in a relatively brief time, altered his environment from the primitive to the civilized, then faster still to the affluent, artificial, pressurized environment in which we find ourselves today.

And over all that time, with all those changes wrought by man's improved intellect, one thing is still the same, still attuned to a primitive natural environment, and this is--the human body.

Equipped with this body in 1997 how are we coping?

Here's how we are coping--

Although medical science has virtually eliminated the dangers of infectious diseases, and despite monumental expenditure on medical research, complex equipment, expensive drugs, and new hospitals financed through crippling taxes and "Health Schemes", we find millions of people in the technically advanced countries afflicted with diseases of degeneration--kidney disease, liver disease, glandular diseases, multiple sclerosis, Addison's disease, pernicious anemia, endocrine diseases, autoimmune diseases, gallstones, goiter, congestive heart disease, coronary heart disease, high blood pressure, claudication, varicose veins, gangrene, hemorrhoids, phlebitis and other vascular diseases, edema, anemia, diabetes, cancer, tumors, rheumatism, arthritis, osteoporosis, Paget's disease, bronchitis, pleurisy, asthma, pneumonia, emphysema, obesity, conjunctivitis, failing eyesight, cataracts, retinal separation, glaucoma, tunnel vision, tooth decay, periodontal disease, enteritis, intestinal dystrophy, diverticulitis, appendicitis, ulcer, colitis, hernia, slipped discs, infertility, cystitis and urinary disorders, polyneuritis, behavioral disorders, loss of sex drive, alcoholism, hyperactivity, depression, insomnia, neuroses, premature senility, loss of coordination, tremors, Alzheimer's disease, premenstrual tension, prostate disorder, etc., not to mention trivial things like falling hair, florid face, skin disorders, constipation, indigestion, headaches and fatigue.

This list is not complete, none of the diseases are due to germs or viruses, but are due to faulty metabolism in a body deteriorated through bad lifestyle, faulty diet and unnatural stress.

Many contagious diseases which are caused by germs and viruses, such as herpes, influenza and AIDS, should also be considered as degenerative diseases because they attack everybody but gain a hold only on those with poor metabolism and weak immune responses.

So drugs are prescribed left, right and center, and every shop in town except the hardware stores sells aspirin tablets and Quick-Eze. Have you ever thumbed through a medical journal? The drug advertisements directed at doctors are numerous, colored, lavish, convincing and expensive. The drug firms hand out doctors beautiful calendars and other expensive giveaways. Have you read *Thalidomide and the Power of the Drug Companies*? It would make your flesh creep!

As people get older they expect--and get--disease to a greater extent. "Healthy" persons may experience twinges of arthritis, the blood pressure creeps up, the skin becomes puffy and maybe florid. They need reading glasses, get tired, lose sex drive, have "back trouble" etc.

You say, but that's not disease, that's normal, it's middle age. Wrong. It's the early manifestations of the degeneration of the entire body which, unchecked, leads to the breakdown of the cardiovascular system and vital organs, reducing the quality of life to mediocre, thence to decrepitude and death.

Unless you already know the answer then it is a certainty that it is happening to you right now and will



continue relentlessly. You will survive in indifferent health until a vital organ is stricken, a stroke perhaps, or a heart attack which is, if not the end, then a prelude to the end. There are a number of factors, and depending on the degree of abuse your body receives, so depends your life expectancy.

In summary then:

1. The modern environment and the human body are incompatible and the widespread incidence of disease is evidence of this.
2. The design of the body cannot be changed, so to achieve the harmony necessary for happy living, man must modify his environment by correcting the dangerous factors he has himself introduced.

The laws of Nature are inflexible, and to quote from a lecturer at the Pritikin Longevity Center in California:

"If you would rather die than change your ways, then you will".

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## CHAPTER FIVE

# OXYGEN--THE KEY TO LIFE

*Hurrah, hurrah for oxygen, that energetic stuff,  
I need it bad, I need it now, I never get enough,  
Although I know it caused the rust  
That ate my car with greed,  
Let's appreciate, it bums our fuel so we can all proceed.*

Of all the components of our environment, air is probably the most essential because it contains oxygen without which no animal or plant life could exist.

A continuous supply of oxygen is vital to your immediate survival and the health of every one of the countless millions of cells of which you are made.

Apart from the constant requirements of the cells, oxygen is required for the combustion of fuel in the muscle tissues to produce mechanical energy for physical activity. The greater the activity, the more oxygen is required. Likewise the brain requires oxygen to function, demanding more with increased mental activity.

The air consists of a mixture of 21% oxygen and 78% nitrogen and minor traces of other gases. When you breathe pure air your lungs absorb oxygen which is carried off around the body by the red corpuscles in the bloodstream pumped by the heart. This circulatory system is called the cardiovascular system (cardio means heart, vascular means blood vessels). It is sometimes referred to as the oxygen transport system, or perhaps simply "the circulation". Every one of the trillions of tiny cells must receive oxygen, glucose and other nutrients to remain alive. Thus every function, every movement, every sense, every thought, depends on the efficiency of this blood circulation, right to the microscopic extremities among the cells.

There is more than sufficient oxygen in the atmosphere for normal activity at sea level but the higher you go above sea level the less dense is the air, and a given volume of air will contain fewer molecules both of oxygen and nitrogen. Above 10,000 feet most people start to suffer from oxygen lack; this depends on their individual fitness, lung capacity etc. and activity. (Oxygen shortage does not occur in modern aircraft because the cabin is pressurized.)

To maintain supply as the air becomes more rarefied, you start breathing deeper and more rapidly, and the heart pumps faster, just as it would to maintain supply during exercise. Extremely fit mountaineers have acclimatized to attitudes above 20,000 feet after several weeks, but most people would die, some within minutes at such an altitude. Some early attempts to scale Mt Everest (29,000 feet) were made without breathing from oxygen masks. These climbers spent weeks at base camps slowly acclimatizing to the rarefied air. (The body manufactures many more red blood cells to extract the maximum amount of oxygen from the reduced quantities available.)

I once met Captain Noel who was the photographer on the early British Everest expeditions in the 1920s. He told me he set up a base camp once at about 24,000 feet. He was at first so weak that he lay in

his tent in a sleeping bag for several days after which he regained normal capability. It is incredible that some of the climbers reached within a few hundred feet of the peak without using supplementary oxygen. In 1978 Reinhold Messner and Peter Habeler were the first men to climb the peak and return without using bottled oxygen. Habeler described their exploit in his book *Everest: Impossible Victory*. No matter how well conditioned at sea level, athletes cannot perform their best at elevated places like Mexico City (7,300 feet) or Johannesburg (5,550 feet). They must spend as long as possible acclimatizing before they compete. Thus people with circulatory disorders are well advised to remain at sea level.

In the Air Force in 1944, when aviation medicine was becoming important, pilots were detailed as a part of their training to do a High Altitude Course. One sequence of the course was a "trip" in the decompression chamber. About ten subjects at a time, with a doctor in attendance, were tested as the air was gradually pumped out of the seated chamber to simulate ascending to higher altitudes. In these tests the first signs of hypoxia are when fingernails turn blue and subjects get "tipsy", make errors and giggle etc. after a while at about 15,000 feet and above. (Only richly oxygenated blood is bright red, and of course, venous blood returning to the heart is dark in color, which is why people go "blue with cold" when their circulation is poor.) The "chubby" men are first to be affected, especially the smokers, but when fitted with an oxygen mask they instantly recover.

Being slender and fairly fit I was last to be affected and made 25,000 feet feeling good, writing neat observations etc., and when after a while, the doctor started fitting the mask on my face, I resisted, thinking I could hold out longer. The others were amused and I was told I had been completely unconscious. My notepad displayed decline in accuracy of technical observations, finally becoming "I want to go to sleep" written over and over many times, declining into lines of scribble. I had no recollection at all of writing the last page and no awareness of any lapse in consciousness.

Even at sea level, oxygen can be severely reduced in crowded, badly ventilated places. If there is smoke in the air it becomes far worse because carbon monoxide gas, when inhaled, has a much higher affinity with the red blood cells than does oxygen and will displace a high proportion of the oxygen available to enter the bloodstream. Carbon monoxide is therefore poisonous, and fumes from kerosene heaters or car exhaust pipes will quickly cause headaches and even unconsciousness or death. The carbon monoxide in cigarette smoke causes far more harm to the body than the effects of nicotine and tars.

However, the main cause of oxygen shortage to various parts of the body is caused by impairment to the cardiovascular system. A fuller description follows in the next chapter, but briefly, impairment is due to the following factors, sometimes all of them together:

1. Reduced lung capacity and reduced respiratory efficiency due to poor physical fitness.
2. Red blood cell aggregation (clumping) due to high blood fat levels This results in
  - (a) reduced oxygen pick-up from lungs;
  - (b) increased blood viscosity (blood thickens), and reduction of circulation;
  - (c) inability of red cells to enter capillaries.
3. Increased blood viscosity due to stress situations (including the effect of smoking and caffeine).
4. Increased blood viscosity due to dehydration.
5. Coronary insufficiency--heart output restricted by poor blood supply due to blocking of arteries (atherosclerosis) in the heart itself. This is known as Cardiovascular disease (CVD) or more specifically, Coronary Heart Disease (CHD).
6. Poor circulation due to atherosclerosis elsewhere in the body, even in the tiny arterioles and capillaries (peripheral circulation).
7. Edema (excess fluid) among cells prevents oxygen delivery.
8. Smoke immobilizes red cells.
9. Reduced enzyme activity inhibits oxygen delivery. Alcohol immobilizes enzymes necessary for cell respiration.

When mental lapses occur due to oxygen shortage to the brain, a person's trained reflexes continue and give the impression, at least for a while, that he is consciously performing. I have seen such lapses in performance of various flying sequences caused by the effect of stress on pilots in poor physical condition, lapses which they later strenuously denied simply because they had absolutely no recollection of them. In

the cases I have observed and which I can substantiate, the stress level in the pilot was higher than normal because he was being "checked". All pilots undergo regular checks and they all feel this extra stress as they strive for best performance coping with simulated emergencies and so on. At the time of observing these lapses I was the examining pilot and had seen cases before of people "switching off" but did not know the cause. The lapse may last only a few seconds.

Similar lapses can occur when blood viscosity increases for other reasons, such as dehydration. For instance, in 1965 a young Air Force pilot described how he conducted a practise gunnery flight at Darwin with the cockpit air selector in the wrong position. Throughout the mission he was sweating heavily in the tropical heat in his enclosed plastic canopy. Approaching to land his Sabre Jet fighter, he had great difficulty in flying the aircraft, he felt quite irrational and did not close the throttle for some distance before touchdown. He could not see if his landing gear indicator read up or down but landed safely. He said, "After shut-down I felt completely enervated, my legs weak, my hands were shaking and I could not concentrate on the simplest subject. I drank a large amount of water and reported to sick quarters where it was agreed I had apparently suffered from heat exhaustion. In an hour I had completely recovered". A less fit pilot would probably not have done so well.

Vagueness and senility are common in old people because of oxygen lack when circulation to the brain deteriorates. Such people (not only old people) are easily irritated and are quickly affected by alcohol as the oxygen transport is borderline. Airline staff should be particularly tolerant of excited passengers. I have seen many cases of refined and cultured passengers behaving most irrationally, not due to alcohol, but the excitement and fatigue.

Poor oxygen supply shows up in all parts of the body. Deteriorating eyesight requires reading glasses for most people over about 45 and hearing acuity declines as tiny blood vessels supplying these senses gradually close with atherosclerosis. Circulation may be so poor that "pins and needles" are felt in the limbs.

Psychosomatic pain means pain that is thought to derive from the mind because inspection of the painful area cannot reveal a reason for it. However, psychosomatic pain occurs in association with high blood viscosity which leads to body tissue being deprived of oxygen, and such pain, like pins and needles, is a complaint by the tissues for more oxygen.

The connection between high blood viscosity and poor oxygen supply is clear, and this I have emphasized in later chapters. In 1947, Doctor F. Windesch of Germany demonstrated that by intermittent withholding of oxygen, normal body cells could be changed into cancer cells. The association of tissue anoxia with cancer and other conditions of disease is explained in later chapters.

Acute, severe oxygen deprivation to a part of the brain due to circulatory failure is called a stroke and if it persists for more than a few minutes, permanent damage will occur resulting in partial paralysis or impairment, or, depending on the severity, perhaps death.

Similar severe impairment to the heart's function is called a heart attack, and wherever else in the body tissue is deprived of oxygen it will perish.

It is interesting that people, apparently drowned, have been revived without brain damage after immersion for as long as 38 minutes. Dr M. Nemiroff of the University of Michigan, a diving specialist, reported this in a recent study. What saved them, he said, was the "mammalian diving reflex" combined with the coldness of the water (below 70 degrees F). This is the reflex that enables sea mammals to submerge for up to 30 minutes. In all circumstances the brain receives priority of blood supply while other body functions shut down. Cold water, he says, reduces oxygen requirements of the tissues.

Breathing pure oxygen can sometimes effect an improvement in some of these cases, but only, of course, if the "oxygen transport" system is working. It is no use giving someone pure oxygen if they are not breathing or if their heart is not beating properly.

People can be administered pure oxygen instead of air by means of an enclosed "tent" or by wearing an

oxygen mask or just by inserting a tube into a nostril.

Dr Finney of Baylor University in Dallas infused oxygen directly into the arteries of diseased monkeys and cleared arterial plaques (diseased growths in an artery lining) in eight weeks. Dr Wissler of the University of Chicago also demonstrated rapid reversal of cardiovascular disease in monkeys breathing oxygen.

## **Hyperbaric oxygen therapy**

By placing a patient in a special sealed chamber or capsule and pressurizing the chamber with air or pure oxygen, it is possible to increase the amount of oxygen taken up by the bloodstream from the lungs and thereby improve the condition of patients with various diseases. Although first employed in Europe and North America over 100 years ago, this form of treatment has only recently started to arouse much interest in medical circles.

Normally almost all the oxygen in the blood is carried by the hemoglobin of the red cells which is almost fully saturated (98%) with oxygen, with only a trace in the blood plasma. However, by increasing the oxygen pressure in the hyperbaric chamber to three times normal atmospheric pressure the plasma will absorb a great deal of oxygen, sufficient to sustain life in the complete absence of red cells.

The beneficial effects are obviously not permanent, but good results have been obtained in a number of disease conditions including senility and multiple sclerosis (see *Multiple Sclerosis* Chapter 21).

## **Negative ion generators**

These are machines which process air to produce negatively charged electric ions in the air molecules. Breathing negatively charged air has been found to produce great benefit such as relief from migraine headaches, rapid healing of burns and wounds and all-round improvement of wellbeing, alertness and creativeness, by the improved oxygenation of the body.

The claims seem well substantiated, and ionized oxygen equipment has been installed in some hospitals including Eden Hospital in Castro Valley, California, Chico Memorial Hospital, California and the Valley Medical Hospital in Fresno, California. The way it works is twofold. Firstly the negatively charged ions of air attach to air impurities causing them to gravitate to the ground, thus purifying the air. Secondly, and of course more important, they say that the ionized oxygen in the air is absorbed more quickly into the bloodstream, giving the effect of breathing pure oxygen.

There is little technical information available on the negative ion generator. One advertiser claimed that the generator restored the correct natural ionization of oxygen molecules in polluted city air. In this event no benefit would be derived in an unpolluted area.

Later, reading Dr Earle Hackett's book *Blood, the Paramount Humour*, I discovered a link between negative ions and oxygen transport by the blood cells: "Now in healthy blood all the red cells carry a similar small negative electric charge. Bodies with the same electric charge repel, and so the cells tend to remain apart from one another. These charges on the red cells can be weakened or neutralized by abnormal protein becoming stuck to the cell surfaces, or by the appearance in the blood of an excess of large molecule proteins either deriving from tissue breakdown somewhere in the body or the result of an infection and the release of foreign material into the bloodstream. When this happens the red cells in non-flowing blood tend to stick together by their maximum-contact surfaces which means they become arranged like piles of coins or dinner plates--called 'rouleaux' by the hematologists."

It would appear feasible then that inhaled oxygen, already carrying a negative electrical charge, would continue to do so when picked up by a red blood cell and so enhance the cell's ability to repel others, thereby preventing aggregation or "rouleaux".

Research by Professor Albert Krueger at the Air Ion Research Laboratory, University of California, Berkley, and Professor Felix Sulman, Hebrew University, Israel, suggests that negatively ionized air prevents excessive production in the body of the neurohormone, serotonin, high levels of which are followed by complaints such as migraine, respiratory troubles, insomnia and many others. If this is the case, another link is established, because serotonin can cause blood to "sludge" or thicken. This was noted by Dr Melvin Knisely, then of the Medical College of South Carolina over 20 years ago, in his paper titled *Intravascular Erythrocyte\* Aggregations (Blood Sludge)*.

\*Red blood cell.

The idea is acceptable then that the negative ion generator can give benefit to people with "sick" blood, but like supplementary vitamins, it would be entirely superfluous to a fit person on a correct diet.

Many people following the average lifestyle and diet live in a fairly reasonable state of health for many years with only a marginal supply of oxygen to most organs of their bodies. In middle age and sometimes earlier, as further degeneration of the body occurs, the oxygen supply becomes less than marginal, and the more serious diseases occur.

Do not despair, inhale deeply and keep on reading.

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## CHAPTER SIX

# ENZYMES

*Ah, sweet mystery of life at last I've found you" (Song)*

Have you watched a jumbo-jet rise into the air, its wheels folding neatly out of sight as it speeds away to some distant land? Guided by electronic devices and computers, the pilot by radio, can speak, if he wishes, to either the local air traffic controller or to his home base, perhaps on the opposite side of the world. The traffic controller observes the aircraft's progress as a coded dot of light moving on a radar screen, and in the airplane itself the passengers can watch the latest movies. Powering the airplane and its 1,001 devices and computers are great jet engines burning vast quantities of carbon and hydrogen in the form of kerosene from large tanks in the wings.

The aircraft vanishes into the distance, leaving a white vapor trail high in the sky. You reflect on the wonders of civilization, the complexity of it all ...

Powered also by carbon and hydrogen (from food), combining with the oxygen from the atmosphere, are the microscopic cells of the body, each one a thousand times more complex than any jumbo-jet. Reflect again. Imagine, as you read these words, the chemical and electrical processes going on inside your brain. Imagine the same processes, stepped up, in the minds and bodies of two tennis players contesting a hard match, or say a jazz saxophone player improvising a hot solo--senses racing, fingers moving in a blur. Thoughts, actions and reactions--how can they occur so fast, billions of body cells so perfectly coordinated?

### ENZYMES!

Every one of the countless processes within the body requires energy, released without the severe heat of fire, with exact precision, at a speed too fast to comprehend. Enzymes make this possible.

As school students all know, chemical reactions can be speeded up by the use of catalysts--chemicals which, without changing in form themselves, can influence other chemicals to combine and change at great speed. Because they remain unchanged, catalysts can be used over and over again. Enzymes act as catalysts in the body, enabling the release of energy and the operation of metabolic processes to occur at lightning speed.

Enzymes, however, have characteristics surpassing those of chemical catalysts and appear to hold the key to the mystery of life itself. They have been described as possessing properties intermediate between dead colloids and living cells, and to carry outside of the cell certain properties belonging to living matter. Unlike simple chemical catalysts, enzymes are consumed. Enzymes perform two separate but overlapping functions in the body:

1. The constant metabolism to do with tissue maintenance and general body functions.
2. The digestion of food.

Enzymes, which are protein-like substances, are produced in countless forms by the body, and countless thousands of combinations or systems. Each enzyme exists for a specific purpose and there is not one

body process--thought, digestion, movement or growth--that can occur without enzyme activity. Life, animal or vegetable, cannot exist without enzymes. For all intents and purposes, life and enzyme activity are one and the same. Enzyme levels in the body can be measured, and it is a fact that even though vitamins and mineral levels remain fairly constant throughout life, enzyme levels do not; they are highest in young adulthood and decline with age. Enzyme levels rise in acute illness, if the body has the resources, but are always low in chronic disease.

Dr Edward Howell, of Chicago (now of Fort Myers, Florida) in his book *The Status of Food Enzymes in Digestion and Metabolism*\* says: "The fact that the enzyme content of organisms is depleted with increasing old age is forcibly presented when fluids or tissues are examined at different ages. After full mature growth has been attained there is a slow and gradual decrease in the enzyme content of organisms. When the enzyme content becomes so low that metabolism cannot proceed at a proper level, death overtakes the organism". This decline in enzyme production is explainable by the silting up and degeneration of the body cells which, it appears, is the cause of the problem and not a result of it. (See next chapter.)

\*Reprinted in 1980 by Omangod Press under the title *Food Enzymes for Health and Longevity*. See also *Enzyme Nutrition*, E. Howell (Avery Publishing 1984).

Enzyme activity requires the presence of moisture, and varies with temperature and the degree of acidity present. Some enzymes function in an acid environment, others prefer neutral conditions, and some alkaline.

Maximum activity occurs at different temperatures depending on the acid/alkaline balance, and at different degrees of acidity depending on the temperature. In the body, enzymes function more rapidly and more effort can be produced at temperatures above normal. Enzyme activity reaches a maximum at fever temperatures which accompany acute infection, thus accomplishing maximum action by the body's defensive mechanisms.

In 1921, Professor Eugene Du Bois described in the *Journal of the American Medical Association* that a rise in temperature from the normal 37°C (98.6°F) to 41°C (105° F) produced a 50% increase in the metabolism of the human body. In 1926, Dr S. Wright in his *Applied Physiology* stated that for every rise of one degree Fahrenheit, the basal metabolism increases by seven per cent.

The normal human body temperature ranges from 36°C (97°F) at between 2 and 5 a.m. when the metabolism is slowest, to 37.2°C (99°F) at between 2 and 5 p.m. when the metabolism is greatest.

These facts, in addition to explaining the function of fever, also explain why it is necessary for athletes to "warm-up" before competition and why drowning people survive longer in cold water.

Above 42°C (107°C) body enzymes eventually become impaired and if enzymes in raw food are heated to 48°C (118°F) for more than half an hour they are destroyed. It should be noted that the destructive effects of heat are most pronounced when moisture is present. Dry heat is not destructive to enzymes until temperatures above 150°C (302°F) and at lower temperatures than this extracted enzymes in powder form suffer no damage.

Cold blooded organisms such as insects or reptiles, have body temperatures which vary with the temperature of their surroundings and are sluggish or inactive in cold weather, becoming active in the summer or when able to bask in the sun. In experiments, the metabolism of insects can be speeded enormously by increasing the temperature, but at the same time this greatly shortens their lifespan. Slow moving creatures such as tortoises are capable of living to a great age, and so too are elephants, also slow moving. Elephants have an average body temperature of 35.5°C (96°F), whereas fast moving creatures such as small birds have body temperatures of 42°C (108°F) and are short lived.

Seeds contain enzymes which are inhibited until exposed to conditions of moisture and temperature favorable to germination. Thus in temperate climates new growth commences in the spring, and maximum growth occurs in the summer. In damp tropical climates lush growth occurs all year round.



The enzyme potential of seeds is inhibited by specific inhibiting agents in the seed which ensure the seed remains inert and apparently lifeless, perhaps for years, until conditions favorable to germination are encountered. Cooked food keeps well because its natural enzymes which would otherwise decompose it, have been destroyed, and it will only decompose when live enzymes are introduced by various microbes in the air. Because enzymes are inhibited by cold, refrigerated food keeps well and frozen food will keep indefinitely. Similarly, dehydrated food will keep indefinitely because enzymes cannot function without moisture. Canned food also keeps indefinitely because its enzymes have been destroyed by heat and the food sealed in the can from further enzyme contact. Preservatives work by inhibiting enzymes and this is why preserved foods are difficult to digest.

All living organic matter, animal or vegetable, lives only because of enzyme activity, and upon death it is decomposed and returned to the earth by enzyme activity.

The digestion and assimilation of food requires that the food be broken down into constituents which can be absorbed and utilized by the body. Protein must be broken down into usable amino-acids, starch into sugar, and fats split into simple components. Minerals and vitamins must be extracted and either put to immediate use or stored away. All of these actions are accomplished by about a dozen different digestive enzymes acting separately and together. Some of these enzymes exist already in the food if it is uncooked, but the majority are provided in the digestive juices made in the body and secreted into the stomach and intestines. The pancreas provides some of these but most are provided by the cells of the intestinal villi.

Because cooked food can be digested with apparent ease by most people, it is maintained by some authorities that cooking is relatively harmless to food, depleting only a little from its nourishment. It is also maintained that the destruction of food enzymes by cooking means nothing because the enzymes are supposedly destroyed anyhow in the acid medium of the stomach before the food reaches the intestine. This argument is wrong, it has been shown over and over again that although some of them are destroyed in the stomach, exogenous enzymes (i.e. from outside the body) contained in raw food play an important part not only in assisting the digestive processes, thus relieving the pancreas of extra work, but in addition, are absorbed into the lymph and blood stream to supplement enzyme production within the body.

Dr Howell describes how the digestive enzymes secreted by humans eating cooked foods, are much stronger than those secreted by animals eating raw food, and how the human pancreas is hypertrophied due to overwork. He says: "A separate and distinct organ, the food enzyme stomach, is widespread in Nature. It was evolved specifically to pre-digest food by food enzymes before the body's digestive enzymes come into contact with the food. I have also documented that three outstanding, authoritative texts, *Gray's Anatomy*, *Cunningham's Anatomy* and *Howells Physiology* have recorded that the human stomach consists essentially of two parts--the upper section and the lower section, with different physiological duties. The upper part of the human stomach performs the same function as the food-enzyme stomach of animals, which is the predigestion of food by food enzymes".

The enzyme content of natural food is proportional to the amount of energy (calories) contained. Raw vegetables do not contain a great quantity of enzymes and so salads do little to compensate for the destruction of enzymes in cooked food. Fruit is high in enzyme content. Fruit will ripen rapidly then decompose rapidly in hot weather, while vegetables may only wilt and shrivel. Animal protein foods, meat, fat and dairy products when raw contain valuable enzymes.

Whereas the enzymes of the body's digestive juices or of manufactured enzyme supplements are much stronger than enzymes in raw food, the consumption of raw food stimulates the secretion of weaker hydrochloric acid into the stomach so that exogenous enzymes in the food can perform longer and with greater effect before being neutralized.

Dr Howell describes experiments which show that it is possible for unsplit, complex substances such as bacteria, yeast cells, proteins and fats to be absorbed into the bloodstream and lymph. Such substances in the body fluids are foreign and therefore antigenic,\* provoking allergic responses and leucocytosis, the increase in the blood's white cells. The experiments showed that enzymes in the blood serum, if adequate, complete the digestion of these substances. It was shown too, that when enzyme levels were low and symptoms of allergy were present, these symptoms subsided and enzyme levels returned to normal after

large doses of pancreatic enzymes were administered orally to the patient.

\*Antigens are described in Chapter 19, *The Immune System*.

It is argued that cereal foods must be cooked for them to be digested, and this is true for the following reasons: firstly, heat is needed to burst the cellulose envelope surrounding the starch in the cereal so that the digestive juices can get access to the starch, and secondly, the heat not only destroys the natural enzymes but also the enzyme inhibitors which would otherwise prevent the pancreatic enzymes working. In this way cereals can be digested, but more so than with any other cooked food, so many extra digestive enzymes are required that the pancreas is overworked.

Nuts, considered generally as health food, are seeds and contain enzyme inhibitors which must be neutralized before they can be digested. The best way of obtaining nourishment from seeds and nuts is by germinating them and consuming them raw.

The regular consumption of cooked food results in the enlargement of the pancreas, and hypertrophy of this organ is the most pronounced in people who consume large amounts of cooked grains (including rice). By comparison, as a percentage of total body weight the human pancreas is over twice the size of the pancreas of herbivorous animals, the only explanation being that humans consume cooked food. Experiments at the University of Minnesota showed that when rats were put on a diet containing 80% heat-treated carbohydrate carefully constructed to contain all nutrients and vitamins, the pancreas and sub-maxillary glands increased in weight 20-30% in a period of 155 days.

Thus, notwithstanding the fact that cereals of one kind or another constitute the basis of the diets of most humans, this form of food cannot contribute to optimal nutrition. What constitutes optimal nutrition is discussed in later chapters.

Accompanying the hypertrophy of the pancreas brought about in the digestion of cooked food are changes in the gonads, adrenals, pituitary and other ductless glands. A study of people killed accidentally showed that all of those over 50 had a defective pituitary gland, which is the master gland of the body.

To say that enlargement of the pancreas demonstrates the capability of the body to adapt, is an argument valid only in the short term. Our object is health and longevity. It was proposed by a health professional in a lecture I heard recently, that manufactured dog food, scientifically prepared to contain a perfect balance of nutrients, was capable of providing perfect nutrition for humans too. Why not? Laboratory animals fed similar scientifically prepared food appear to maintain good health. Such observations however, are not valid because the test animals are always young ones whose lives are terminated before degeneration is evident. In experiments where rats have been kept several years on manufactured food only, the animals have been observed after only two years to develop a variety of pathological conditions, commonly suffered by aged humans, including blindness in half of them, followed by death soon afterwards.

To conclude with some further remarks from Dr Howell: "At first thought it might be presumed that hypertrophy of the pancreas is a desirable accommodation. But there is always the tendency for the hypertrophy of excessive function to proceed to the atrophy of exhaustion. An atrophy of the pancreas occurs in many terminal wasting diseases".

Dr Howell's whole argument is that if throughout life the enzyme production within the body is overstrained, in the later years it is inevitable that enzyme levels will diminish sooner than they should, thus accelerating degeneration and old age. Referring to an experiment at Cornell University in which it was shown that the lifespan of rats could be almost doubled by dietary manipulation, Dr Howell said. "After reviewing this work, I cannot see how it is possible to escape the conclusion that when the enzyme reserve (I use this phrase interchangeably with the term vitality) is drawn at a more rapid rate it will be exhausted sooner and consequently life will end earlier".

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## CHAPTER SEVEN

# THE CAUSES OF DEGENERATION

*It appears to me necessary to every physician to be skilled in nature and to strive to know, if he would wish to perform his duties, what man is in relation to the articles of food and drink and to his other occupations and what are the effects of each of them on everyone. Whoever does not know what effect these things produce upon a man cannot know the consequences which result from them. Whoever pays no attention to these things, or, paying attention, does not comprehend them, how can he understand the diseases which befall man? For by every one of these things a man is affected and changed this way and that, and the whole of his life is subject to them--whether in health, convalescence or disease. Nothing else then can be more important and necessary to know than these things.*

*Hippocrates*

Degeneration is a condition of disease; it is a state of disrepair of body tissues which accompanies the accumulation of harmful substances among and within the body cells and is characterized by lowered enzymes levels and a diminution of all body functions.

Depending on the diet and other lifestyle factors, the process of degeneration can be rapid, terminating life in youth or middle age, or deferred, to finally terminate life by what is known as old age.

### Old age

The dividing line between acute degeneration and natural degeneration is indistinct because genuine old age cannot be clearly defined. Dr Charles de Lacy Evans of England, said:

"We are not justified in putting a limit to the days of man; science fails to prove one, religion does not dictate one. The well known expression 'the days of our years are threescore years and ten', is not an edict from God, but simply a lamentation that the term of life was so reduced by the wickedness and ignorance of the people."

In his book *Old Age Deferred*, Dr Arnold Lorand of Austria described old age as a condition in which there is a diminution Of metabolism, i.e., the assimilation and conversion of food into energy, and is characterized by the abundant growth of connective tissue in vital organs, diminution of oxidation, and increased auto-intoxication.

Dr De Lacy Evans, in his book *How to Prolong Life: An Enquiry into the Cause of Old Age and Natural Death*, said further:

"The most marked feature in old age is that fibrinous, gelatinous, and earthy deposit has taken place in the system; the latter being chiefly of phosphate and carbonate of lime, with small quantities of sulphate of lime, magnesia and traces of other earths."

The deposits occur as well in the bones, and blood vessels, which harden and reduce in caliber. Dr Evans

quoted Dr C.J.B. Williams:

"The process is, therefore, to be viewed as almost entirely of a chemical nature, and as consisting of the concretion and accumulation of calcaneous salts, phosphate and carbonate of lime in the debris of animal matter."

That was written over a hundred years ago. This viewpoint is supported today by Dr Arthur C. Giese, Professor of Biology Emeritus, Stanford University, quoted from his book *Living With our Sun's Ultraviolet Rays*:

"In our multicellular bodies some cells, such as those of the epidermal basal layer, continue to divide throughout life; others--for example nerve and muscle cells--differentiate and cease dividing at birth. Nevertheless, they continue to function for a lifetime, with gradually lessening activity and progressive filling with insoluble wastes and pigments."

The decline in function is characterized by, and is measurable by, a corresponding decrease in enzyme levels and activity.

Animal tissue cells grown in cultures on synthetic diets in the laboratory, properly cleansed and drained, do not degenerate in this fashion and may outlast the animal of their origin many times over. Some research indicates (at least in theory) that in ideal circumstances immortality is possible. Other experiments with live animals fed on minimum rations showed improved health and a life extension of 50-100% over that of the unrestricted control animals.

So it becomes clear that "old age" occurs because we take into our bodies, mainly in food, harmful substances which for one reason or another, the excretory organs fail to eliminate. Some of these substances serve no purpose at all in the body and are best avoided if possible, and some are perfectly normal byproducts of normal body processes.

It follows then that old age can be deferred by selecting foods which provide the best nutrition with the least residue of byproducts, and consuming such foods in moderation. However, notwithstanding the care with which food is chosen, there is strong evidence that the cooking of food--regardless of anything else--is, in the long term, the factor most harmful to the human body.

## **Acute degeneration**

Most people die prematurely, unwittingly by their own fault. People always have, and no doubt always will. In the 17th Century, poet John Dryden wrote:

*Look around the habitable world, how few  
Know their own good, or knowing it, pursue.*

Today, the reason that few people die of natural old age is that they are killed long beforehand by one or more of the unnatural conditions listed in Chapter 4. Regarded as separate diseases, these complaints are in fact not diseases at all, they are symptoms. There is only one disease, and that is Lipotoxemia, the stifling and poisoning of body processes by a bloodstream depleted in oxygen and polluted with fat, cholesterol and toxic substances. Rectify this disease, and the symptoms go away.

That may sound like over-simplification but please bear with me. The reason so many people have badly conditioned bloodstreams is because of the sort of food and drink they consume, usually in conjunction with other bad living habits. And the reason that the blame for their ailments is not correctly assessed is because modern orthodox medicine is wrongly oriented and therefore confused. Doctors are, however, beginning to realize that the difference between disease and health is not a simple matter of germs and drugs, and are starting to think a little more in the manner advised by Hippocrates over 2,000 years ago.

In a paper presented to the International Academy of Preventive Medicine at Phoenix, Arizona, in 1977, Dr Archie Kalokermos of Sydney, and Dr Glen Dettman of Mentone, Victoria, described how Louis

Pasteur set the entire world on the wrong track. They presented evidence which showed that Professor Antoine Bechamp was correct in claiming that disease happens when something goes wrong in the body that permits germs to invade it, and that Pasteur distorted this to the germ concept, "proving" the germ concept by demonstrating how inoculation works.

Because of Pasteur's dramatic demonstrations of immunization against virulent diseases, the "germ concept" of disease generally became accepted.

Claude Bernard, a contemporary of Pasteur and famous for many medical discoveries, introduced the concept of the "milieu interieur" meaning the constancy of the internal chemistry of the body and the coordinated regulation of its various parts. This concept is commonly called the "whole body" concept of health and disease. Pasteur and Bernard many times debated the two concepts and it is significant that on his deathbed Pasteur said to Professor A. Renon who was caring for him, "Bernard was right. The microbe is nothing, the soil (body) is everything".

The particular features of our society that affect our health so badly, are unfortunately generally considered highly desirable, and people in the poorer "developing" countries are striving for greater affluence so they can have them too.

I have watched it happen in Singapore, a city I have travelled through constantly since 1946. The spree begins with sugar, soft drinks, sweets, then cigarettes, white-man's refined and packaged food, meat, alcohol and finally motor cars and television. Unfortunately, the two most dangerous dietary substances, fats and sugar, are plentiful and cheap, making it possible for the poorest people, who may already have only marginal nourishment, to "progress" into a worse situation.

By the same way have gone other fine races such as the American Indian, the Eskimo and the Australian Aborigine. Many of these people now are just like the majority of Europeans, fat and slovenly and affected with disease.

Just as Sir Robert McCarrison's (Major General, British Army) tests with albino rats back in 1927 in India showed the group of rats on the Hunza diet displayed the physical excellence of the Hunza race, so did the group on the poor diet of Indians of Bengal and Madras soon display the appalling disease rate of those Indian people at that time.

Likewise, rats on a diet of the poorer English classes of the time white bread, margarine, sweet tea, boiled vegetables, tinned meats and jams, soon displayed poor health and stunted growth. McCarrison's work is described in the informative book, *The Wheel of Health* by G. T Wrench, MD, published in London in 1938.

Japan has a low rate of heart disease, but it is prevalent among the wealthy. Among the Japanese who live in Hawaii it is higher again and among those living in California it is not different from other Californians. As Japan becomes wealthier, beef consumption and dietary fat and sugar consumption are increasing and the Japanese cardiovascular disease rate is rising.

Deficiency diseases of the poor and ignorant are matched in the developed Western nations by the degenerative diseases of the affluent and ignorant, the two often combined. Dr Spiro Moraitis of Melbourne has compiled data on heart attacks among members of the Greek community in Australia. Between 1962 and 1969 the rate of heart attacks among the Greeks was only one sixth that of the general Australian population, but has since doubled and is now one-third. The migrants whose diet once was based on fresh vegetables cooked in vegetable oil with very little meat or butter, as they gradually adopt Australian dietary habits, suffer accordingly\*.

\*This is not to recommend the use of vegetable oil. All concentrated fats are detrimental but vegetable oil contains no cholesterol.

Australian Aborigines, once a healthy race, now suffer a disastrously high incidence of diabetes. Diabetes is a metabolic disease, one caused by faulty body chemistry, the result of bad diet--(described in Chapter 21). The National Trachoma and Eye Health Program found that nearly 40% of rural Aborigines

in Australia suffer from trachoma and in some areas the incidence is as high as 70%. The program also found a high level of middle ear and skin infections among them. The report also showed a close association between trachoma and the standard of housing, water supplies, sewage and waste disposal methods and certain climatic factors. The director of the program, Professor Fred Hollows of the University of N.S.W. said, "It is obvious that State and Territory-based health organizations have not been able to deliver eye medical care to the Aboriginal in rural Australia".

Maybe the Aborigines do not need medical care. Is it coincidence that such Aborigines suffered the loss of "every second child" in infancy? Dr Archie Kalokerinos in his book *Every Second Child* described how he reduced these infant deaths to zero by ensuring the children adequate Vitamin C.

These Aborigines are degenerated because they no longer eat their natural foods but consume diets largely of fat, sugar and refined carbohydrate. A Department of Aboriginal Affairs report disclosed that in one area of the Northern Territory, Aborigines spent 80% of all social security cheques on liquor, and in 1976 when the social security benefits for the whole town increased by \$800 per week the takings of the only liquor outlet there rose also by \$800. In that whole community 55% of total income was spent on alcohol.

As to their standard of housing etc., here is an interesting extract from *The Wheel of Health*:

"Yet apart from proofs and arguments already put forward to maintain the vital primary claim of food, there is one very exquisite human experiment made by Dr G. C. McGonigle, Medical Officer of Health, Stockton on Tees (UK) which strengthens this claim in a manner that may be called one of accidental finality.

"Stockton on Tees is an ancient market town which has grown rapidly in the last three quarters of a century and now (1931) has a population of 67,722. Of this population in that year 40% of the males between fourteen and sixty-five were unemployed.

"Stockton has slums, and the Town Council recently carried out a vigorous policy of better housing. It was this that gave McGonigle an opportunity to exercise his skilled powers of observation. A survey of housing needs was taken in 1919, and the largest section of the town scheduled as an unhealthy area was dubbed 'No. 1 Area'. It was decided to demolish part of No. 1 and transfer its inhabitants to a new up-to-date municipal estate, agreeably named Mount Pleasant. In 1927, 152 families, comprising 710 individuals, were transferred to Mount Pleasant, leaving behind in No. 1 Area 289 families with a total of 1,298 individuals.

"Here, then, were contrasting conditions of new and old, of good housing and of slum. Naturally everyone thought the transfer to Mount Pleasant would be a betterment. But McGonigle watched.

"Even he, however, watched at first according to the routine of his official position. It was only when he found that something odd was happening and the expected success was not coming off, that he concentrated a keen and skilled observation upon the anomaly.

"His attention was drawn to it by the fact that the health of the inhabitants of Mount Pleasant, instead of improving or at least remaining stationary, began to deteriorate, whereas that of those families and people left behind in the slums did not. McGonigle then began to test out what was happening statistically. The standardized death rate for the first five years following upon the transfer was 33 per 1000; that of the unchanged slum 22 per 1000. The rate of the Mount Pleasant estate of '33.55 per 1000 appears to be extraordinary, in view of the fact that it represents an increase of 45% over the mean standardized rates for the same individuals in the previous quinquennium' is McGonigle's comment. The increase was not due to any peculiarity of infant mortality, epidemic, or other recognized cause. It was just there steadily throughout, and it represented an increase in the various groups, from 0 to 10, between 10 and 65, and over 65.

"There was even an increase of one-third in still-birth. It was a characteristic of the whole people of Mount Pleasant. It was 'a real increase and beyond the probable extent of fortuitous variation'.

"What was it due to? The better housing? It seems absurd that something better should prove something worse. Yet, in spite of the best intentions, this happens if primary things are forgotten. Man lives primarily on food, and the food of the Mount Pleasant people was what had deteriorated.

"When living in the slums these people paid rents which averaged 4 shillings and 8 pence per week per family. In 1928 on the new estate the rent was 9 shillings and 3 pence halfpenny, or double the original rent.

"Consequently there was less money to spend on food. The food per head per week cost 34.7 pence and in the unchanged slum 45.6 pence."

McConigle was, therefore, forced to the conclusion that the deterioration of food led to the deterioration of health. "Such environmental factors as housing, drainage, overcrowding or insanitary conditions could obviously be excluded."

In a 1982 research report from the Baker Medical Research Institute, Victoria, Dr Kerin O'Dea described how a group of ten diabetic urbanized Aborigines were returned to the bushland for several weeks where they reverted to their traditional native foods. Although the native diet was extremely high in protein (over 50%) the fat level was fairly low (13%), and at the end of the test the Aborigines were almost completely clear of diabetic symptoms and other metabolic abnormalities. As the report stated: "The public health implications of these results are enormous".

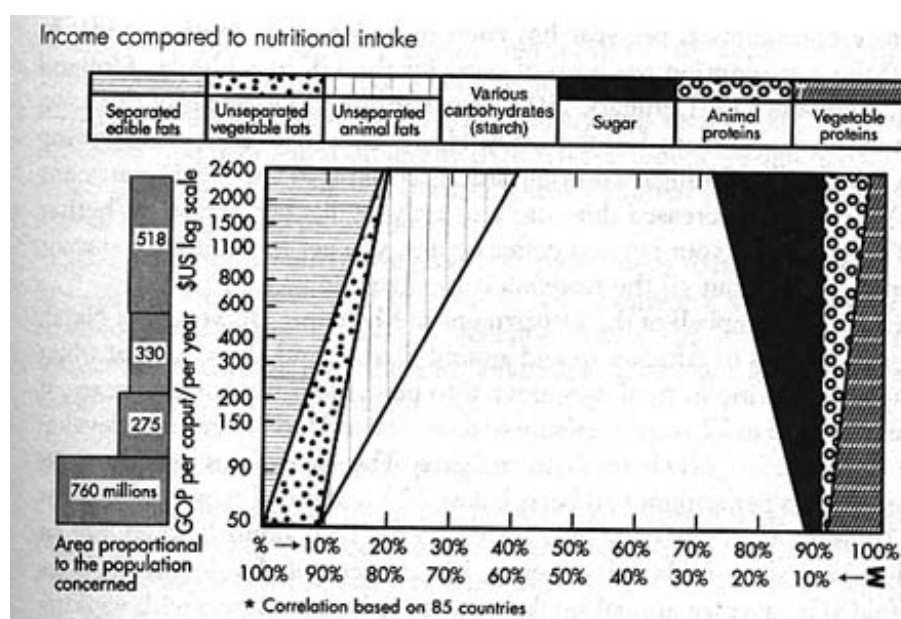
The Federal Ministry of Health should investigate the observations made by Dr Wrench and Major General McCarrison so long ago, and those of Dr O'Dea, and start applying some of the principles not only to Aborigines but to the entire population.

The United States is leading the way. Under the leadership of Senator George McGovern, the US Senate Select Committee on Nutrition and Human Needs was set up 16 years ago to investigate the dietary situation of the poor people in the US. They soon found that the problem of poor nutrition extended to the entire population, not only to the poor.

They have a long battle ahead with apathy, ignorance and vested interests, but at least the problem there is recognized.

The diagram immediately following appeared in Food Technology in Australia, July 1976. It compared diet with degree of affluence.

Income compared to nutritional intake



The shaded boxes on the left indicate the number of millions of people in the world alongside their



annual incomes per capita in \$US (1962). Across the graph is shown the proportion of different dietary components related to the total calories in the diet.

The poorest people at the bottom, it can be seen, take only about 10% of their total calories in fats of all kinds; most of their diet is natural carbohydrate and the rest is mainly vegetable protein.

Now look at the top--that is where we are. It shows 40% fats, about 30% carbohydrate, 19% sugar (refined carbohydrate) and the rest protein (mainly animal). This was in 1962 and since then, with the increased consumption of take-away foods loaded with fat, salt and sugar, there has been further, marked deterioration.

Many people eat double the amount of calories they need, which means that compared with the poor populations, they eat seven times as much fat, not as much natural carbohydrate, six times as much sugar, double the protein, and about ten times the cholesterol. It is incredible what the human body can stand!

Remember, apart from the people in some disaster areas who indeed are starving, the vast majority of the populations on that low scale live free of early degenerative diseases despite cooking their food, lack of hygiene and specific deficiencies.

How quaint, we refuse to eat in dirty restaurants, object to soiled table linen, inspect cutlery, shoo away flies, avoid using chipped plates, then proceed to commit slow suicide with a huge three-course, hygienically prepared meal. In addition to the main dietary, assault, spices, condiments, salt, alcohol, tea, coffee and so on, impose more wear and tear on the kidneys and other vital organs. Then on top of that, our supermarket type food contains hundreds of chemical additives of no nutritional value but capable of harm. *Lancet*, August 16, 1969, disclosed that in a year, on the average, one consumes about three pounds of chemicals which are not normal constituents of foods. Since 1969, food has become more chemicalized.

Awareness of nutrition by the general population and the medical profession has only fairly recently occurred. The danger of fat and sugar seems to have been partly recognized but a dangerous obsession for protein foods is still current.

Among the worst hazards to health, worldwide, is the consumption of sugar, World production of sugar in 1850 was one-and-a-half million tons, in 1970 it was 70 million tons. Allowing for population increase, the average consumption per year has risen from 3 pounds to 45 pounds. In 1970 the consumption per head of sugar for the UK was 120 lbs, Holland 120, Australia 115, Denmark 110, and according to Dr Antar of the Iowa State University, about 170 in the USA. However, in the ten years following this report, the US sugar consumption, according to the US Department of Agriculture, decreased drastically to only 74 lbs per person. Whether you take sugar in your tea and coffee or not, you get it, whether you want it or not, just about all the readymade food you buy.

Dr G. D. Campbell of the Department of Medicine, University of Natal, studied diabetes in Africans in and around Durban and observed that when Zulu people living in rural areas move into permanent residence in town, it takes about 18 to 22 years' exposure to town life and food in order to develop the eating habits which result in diabetes. The rural Zulus average sugar consumption per annum had been below 20 lbs and had now doubled, but for Zulus living in town, the average was 89 lbs. Dr Campbell noted that an Indian migrating to Natal increases his chances of developing diabetes tenfold. The average annual intake in India is 12 lbs whereas with working class Indians in Natal is 77 lbs and with higher class Indians it is 110 lbs.

He noted that the average "consumption thresholds" of about 66 lbs per person must be exceeded in most racial groups before diabetes becomes common, i.e., the same as Europe or USA. Dietary fat, a more significant factor in diabetes, was not taken into account (see Chapter 21).

In the overall picture, dietary fat whether animal or vegetable, must be considered the most dangerous single factor in the cause of degenerative diseases. More than any other factor, high levels of fat correlate with every known disease condition.

With the marked reduction over the past ten years in the general consumption of sugar and cholesterol-

containing foods such as eggs, together with general dietary improvements like reduction of coffee and salt intake, there has been a significant decrease in deaths from heart attack but no change in the death rate from cancer or diabetes, which are the next most common causes of death. This fact implicates fat to be by far the most dangerous dietary substance, although natural fats contained in fish may be somewhat less harmful than others (see Chapter 10--platelet aggregation).

## **Food addiction**

The stimulus to the sensory organs by various drugs such as alcohol, nicotine, marihuana and so on, lead inevitably to addiction. When deprived of this stimulus for any length of time the body will crave for more. Thus it is with cooked, spiced and otherwise flavored foods, and this fact applies not only with people but also to all kinds of animals. Experiments have shown that when given the choice of both their natural food and cooked, flavored "Western" food, animals such as rats, mice, dogs and even wild deer will soon ignore their natural food in preference for the more "stimulating" food and continue this preference, eating to excess, and eventually dying prematurely.

The addiction to unnatural food is as powerful as that of any drug, and because we all have it, and because so few people are aware of it at all (indeed the worship of food is accepted almost as a virtue)--this addiction (particularly to the fast, takeaway foods) is today by far the greatest threat to human health and happiness.

## **Constipation and auto-intoxication**

Constipation is the slow transit and delayed expulsion of fecal wastes from the intestine and colon. Because of the slow transit time of animal protein foods, fats and refined cereals, constipation is unavoidable on the Western diet and exists to a marked degree even when there is a regular daily bowel movement.

It has always been known that constipation leads to all kinds of indispositions. Hundreds of medical papers, some written centuries ago, link constipation and its poisoning effects with practically every known condition of disease, particularly with cancer. Conversely, it is a fact that in native populations who never experience constipation because of their predominately vegetable diets, the degenerative diseases of civilization are practically unknown.

It was established in 1909 from experiments by Drs C. C. Herter and A. I. Kendall at the Rockefeller Institute, and others, that a high protein diet resulted in the dominance of proteolyzing, putrefactive anaerobic bacteria in the colon which produced innumerable toxic chemicals.\* With the constipation associated with such a diet, the bile fluids as they circulate back to the liver from the colon, carry toxins with them which must be neutralized by the liver for elimination via the kidneys. Eventually the liver is incapable of coping fully with its detoxifying duties, with the result that the toxins circulate in the blood to poison the system and damage the kidneys. Sir W. Arbuthnot Lane in a paper *Chronic Intestinal Stasis* written in 1913 stated that constipation "facilitated the multiplication of organisms and the subsequent development of toxemia in the bloodstream which led to progressive degenerative changes in every tissue and very definite and unmistakable series of symptoms".

\*Auto-intoxication had been recognized and described by many naturopathic and medical doctors during the 19th Century.

In 1933, Dr Anthony Bassler, Professor of Gastroenterology, Fordham University, and New York Polyclinic Medical College, after a study of over 5,000 cases over a period of 25 years stated that: "Every physician should realize that the intestinal toxemias are the most important primary and contributing causes of many disorders and diseases of the human body".

There have been countless such medical pronouncements over the years, and it has been known since 1909 that the intestinal flora can be rapidly normalized and auto-intoxication eliminated by changing to a high natural carbohydrate diet. The medical professionals have chosen to ignore this information (if indeed

they were aware of it) in favor of drugging the various symptoms.

To counteract the continual toxic assaults to which people unwittingly subject themselves, the vital organs work constantly to detoxify the blood and to eliminate harmful substances from the body. For years most of these substances are expelled, but those excesses with which the excretory organs cannot cope, accumulate in all tissues and organs, gradually aging them and depleting their function. For years a person may enjoy tolerably good health and appear youthful even, but eventually the degeneration compounds to the point where breakdowns of organs commence and various disease conditions appear.

So bewilderingly complex are the chemical interactions within a living organism, the simplest cell presenting a miracle of automated chemistry, staggering to the mind, that to attempt to influence these interactions by drugs is an insult to nature--analogous to lubricating a fine Swiss watch with sump oil and trying to fix it with a set of car spanners. Crude and brutal.

Pain is Nature's warning that something is wrong, but blocked arteries and decaying organs do not cause pain until at the point of failure, by which time it may be too late. Prevention is better than cure.

## **Diet and longevity**

In 1829, Vincent Priessnitz of Silesia, later to become famous as a nature healer, suspected that the cooking of food conveyed gradual harm over a period of time, to those who ate it. In an experiment with pigs fed different diets he discovered when the pigs were slaughtered, that those on a diet of raw food had firm, healthy flesh whereas the flesh of pigs on a cooked diet was inflamed and brittle.

Successful naturopaths have always been aware of the harm caused by cooking, and this was rediscovered in the 1920s by the authorities of various zoos around the world when they proved that the rapid degeneration and early mortality of animals could be avoided when the animals were fed raw food instead of cooked scraps from restaurants etc.

Regardless of the sort of food consumed, cooked or raw, experiments have shown that the health of laboratory animals can be dramatically improved and their lifespan doubled, simply by reducing their food intake to the minimum required.

In his book, mentioned earlier, Dr De Lacey Evans said:

"On reviewing nearly 2000 reported cases of persons who lived more than a century, we generally find some peculiarity of diet or habits to account for their alleged longevity; we find some were living amongst all the luxuries life could afford, others in the most abject poverty--begging their bread; some were samples of symmetry and physique, others cripples; some drank large quantities of water, others little; some were total abstainers from alcoholic drinks, others drunkards; some smoked tobacco, others did not; some lived entirely on vegetables, others to a great extent on animal foods; some led active lives, others sedentary; some worked with their brain, others with their hands; some ate only one meal a day, others four or five; some few ate large quantities of food, others a small amount; in fact, we notice great divergence both in habits and diet, but in those cases where we have been able to obtain a reliable account of the diet, we find one *great cause* which accounts for the majority of cases of longevity, *moderation in the quantity of food*".

This observation confirms the view that even the best constructed diet partaken to excess will overtax the vital organs and accelerate the degenerative process, and that in the pursuit of longevity not only must a strict diet be followed, preferably uncooked, but at the same time strict moderation in its consumption should be exercised.

## **Lack of exercise**

A secondary factor to diet in the degeneration of health is lack of physical exercise. Exercise is

important because it improves the circulation and the general efficiency of the body's metabolism. In good physical condition, the body can more adequately cope with dietary abuses and other debilitating factors of a bad lifestyle. Therefore, the worse the diet the more important it is to exercise, although it should be realized that only partial protection can be achieved.

Everybody knows that exercise is good for health but not many of the keenest enthusiasts understand how it works. Many of these diligent people could achieve far better results with less exercise and a few simple dietary changes.

The most important benefit from regular exercise is that fat metabolism is improved, thus minimizing the harmful effects of dietary fat. This accounts for instances of longevity among people who, although they consume appalling food, spend much of their time at hard physical activity.

Because there is an element of danger in vigorous exercise for people with unsuspected artery disease, an exercise program should be undertaken gradually, first ensuring less sticky blood by correcting the diet. Subsequent weight loss further decreases the strain. Even highly trained athletes who ignore proper dietary habits acquire unsuspected heart disease and some of them perish from it.

## **In summary**

This entire chapter can be summarized in this single statement made in 1920 by Dr Henry Lindlahr of the USA:

"The primary cause of disease, barring accidental or surgical injury to the human organism and surroundings hostile to human life, is violation of Nature's laws. The effect of violation of nature's laws on the physical organism is: Lowered vitality, abnormal composition of the blood and lymph, accumulation of waste matter, morbid materials and poisons. These conditions are identical with disease because they tend to lower, hinder, or inhibit normal function, and because they engender and promote destruction of living tissue."

## **Sick humor?**

To end this chapter on a humorous note, here are Nathan Pritikin's comments on a few All-American favorites which lead us down the road to ruin.

The McDonald's Hamburger: "It's made by an extremely busy organization bent on destroying our population by teaching McDonald's lifestyle of eating French fries and hamburgers always."

Coca Cola: "If the Russians had to formulate a drink to wipe out the entire American public, they'd have invented Coke. Take the caffeine alone; you don't give a three-year-old coffee, but you give him a Coke. What nonsense."

Ice Cream: "A chemical feast. It's a case of completely destroying an already dangerous milk product."

Pizza: "I can't imagine the Italians could have invented this suicide dish because they are such nice people."

Breakfast Cereal: "As someone has said, there's more food value in most breakfast food packets than in the contents."

Mom's Apple Pie: "This is an ingenious way of destroying the good qualities of apples by loading them with sugar, fat and shortening."

Steak: "Think about this; an excellent fillet has 88% of its calories in fat, only 12% protein. Yet we consider it to be a high protein meal."

Frankfurters: "How can the US Government permit this carcinogenic material to be sold to the public?"

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## CHAPTER EIGHT

# STRESS

*How blessed is he, who leads a country life,  
Unvex'd with anxious cares, and void of strife!  
Who studying peace, and shunning civil rage,  
Enjoy'd his youth, and now enjoys his age.*

John Dryden

Stress is the effect upon a subject when a situation requires them to adapt to it or to take avoiding action. The influence can be emotional or physical but not necessarily harmful or threatening. Whatever the cause, stress evokes physiological responses in the body. Factors which cause stress are called stressors.

Dr Hans Selye, author of *The Stress of Life* and *Stress Without Distress* and perhaps the most experienced researcher on the subject, says factors such as fear, sorrow, joy, excitement, heat, cold or drugs, elicit in the body identical bio-chemical reactions. Whether the influence is pleasant or unpleasant is immaterial, the reaction depends only upon the intensity of the demand to adapt and the duration of the demand. However, the stress caused by elation, which Dr Selye calls Eustress (eu = good), causes less damaging effects because the body readily adapts.

In his evolutionary past, man always had to contend with a certain amount of stress of one kind or another and his body evolved to react properly to it as a normal event. just as man's body over eons of primitive environment developed to function on simple natural food, so it developed to cope with the stresses of a simple natural lifestyle. These no doubt would often have been quite severe but usually of brief duration and never in great profusion. Not only can the body easily contend with a moderate or normal amount of stress, it actually thrives upon its stimulating effect.

When levels of stress reach a point where the body can no longer cope easily, the effect becomes harmful and as Dr Selye says, the condition becomes one of distress. Thus to refer to stress as being harmful is misleading. It is the condition of distress which is harmful.

Whether a stress influence actually produces stress depends upon how a person reacts to it. People react to stress influences in different degrees depending on their knowledge and past experience. For instance a person making their first flight in a plane or their first attempt to drive a car will be more highly stressed than when again they fly or drive. Other stressors, such as money or health worries, will be more consistent in degree and more prolonged.

The most important factor in how someone reacts to stress influences is their personality type. Regardless of their capability to cope with degrees of stress, which depends enormously on physical fitness, some people driven by ambition, curiosity, creativity, adventure, etc. find themselves always in countless situations of stress, resulting from over-commitment, excitement, frustration and fatigue. Others plod happily along, unruffled by traffic lights and petty restrictions, with time to relax and read the paper. They are not more resistant to stress, probably less resistant, they simply do not go looking for it. Very broadly, people fall into one or other of these categories, the former being called type 'A' and the latter, type 'B'.

There is a prodigious assortment of stress influences to which we are all exposed in our modern way of life. Many are routine and unavoidable, some unexpected, some big and some small, perhaps momentary, perhaps continuous. They can be physical, such as injury or cold, but mainly they are mental, i.e. emotional.

Apart from obvious stress factors, the very nature of our society ensures continuous "built-in" stress for many people. The rules of society are often very frustrating in that they insist that everybody, regardless of intelligence, emotions and physical drives, must conform--or adopt a "double standard". Double standards, in themselves stress-inducing, thus have become an essential part of modern life.

And, because the rules are generally discriminating against women, women tend to suffer more from built-in stress, particularly women of high intelligence. It is significant that women, generally, suffer a higher incidence of diseases such as asthma, rheumatoid arthritis, diabetes, migraine and multiple sclerosis, all of which are accentuated by stress.

Stress may also arise from a continuous state of maladjustment and insecurity stemming from situations in childhood. This built-in stress may be very harmful, but with the acquisition of confidence and the establishment of happy relationships, the condition may alleviate entirely.

Dr Taggart of the Middlesex Hospital noticed that even relaxed drivers may double their heart rates in everyday driving situations, particularly when passing other vehicles. Dr Lennart Levi in Stockholm has demonstrated that such diverse stimuli as office work and watching exciting films can produce stress effects.

Regardless of the type of stressor and its individual intensity, each effect is additive, producing in the body a total stress effect and reaction.

The most significant forms of stress are those of a prolonged emotional nature, some of which alone produce distress. Over-stressed, or distressed people, according to the severity of their distress, are very prone to infection and diseases of any kind and these of course act in a vicious way to further increase distress.

Drs Holmes and Rahe of the University of Washington Medical School found that stress factors could be evaluated and used as an accurate predictor of disease. They devised a "Social Readjustment Scale" which graduated major stress factors on a points system.

Highest on the scale was death of spouse which rated 100, followed by divorce 73, marital separation 65, jail term 63, death in the family 63, personal injury or illness 53, marriage 50, job dismissal 47, marital reconciliation 47, retirement 45 and so on. Christmas was No. 42 with 12 points. A total of 150 within the last year was shown to equate with a 51% probability of becoming ill within the next two years and with a total of 300 the probability was 80%.

Apart from susceptibility to infection, stress is a strong influencing factor in the metabolic (degenerative) diseases, very notably in heart disease, hypertension, diabetes, cancer, multiple sclerosis, asthma, ulcers and arthritis where the effect is quite obvious as is described later.

Depression and despair resulting from rejection by a person's family and peers can produce distress severe enough to cause death as occurs in "bone pointing" rituals of Australian Aborigines. On the other hand moral support enables a person to survive intense stress, and sincerely religious people find this support from their faith.

Stress factors which are frequently not considered but which are very significant by their effect on the nervous system and bloodstream, include refined carbohydrates such as alcohol, sugar and white flour products in the diet, and nicotine and carbon monoxide from smoking, and caffeine in coffee and tea. If these factors were taken into consideration, the predictive accuracy of the stress scale to disease would no doubt be much greater.

## The physiological effects of stress

In the primitive environment, stress was caused mainly by danger, the immediate reaction to which is to prepare the body for action, perhaps to fight or perhaps to run away. Capillaries to muscles open up to provide a greater blood flow to them, and capillaries supplying organs unessential to physical action close. Digestion ceases and, stimulated by hormones, the heart increases its rate and output, increasing the blood pressure and breathing speeds up. Fats and sugars are released from body stores into the bloodstream to provide fuel to the muscles, cholesterol levels rise and the blood composition changes to promote rapid clotting in case of injury. A healthy body, whether the danger results in action or whether a false alarm, quickly regains composure.

In our modern environment, stress produces exactly the same physiological responses but rarely is physical action required. The body constantly receives stress stimuli to which it must respond, and sooner or later the capability to respond becomes exhausted, leaving the body overstressed or distressed. In this condition the thymus gland, which controls the body's immune system, becomes shrunken and ineffectual and the lymphocytes (the white cells which defend the body against infection and abnormal cells) become impotent. The viscosity of the blood remains high, the blood flow sluggish, and oxygen delivery to the body tissues is poor. With lowered defenses, disease of some sort is almost inevitable, particularly those of viruses and germs which are ever present awaiting their opportunity.

The Greek philosopher, Plato, suggested "that all diseases of the body proceed from the mind or soul". The great British physician James Paget said "fatigue has a larger share in the promotion and transmission of disease than any other single condition you can name".

Degenerative diseases can be induced by stress in people with lipotoxemia (blood toxemia and high blood viscosity). With oxygen supply to the tissues at a borderline level because of these other factors, stress can upset the delicate neurohormonal balance of the body and aggravate the blood condition and increase its viscosity, causing the onset of related diseases such as angina, congestive heart failure, hypertension, ulcers, arthritis, cancer, eczema, migraine, diabetes, multiple sclerosis etc.

This explains the mysterious reversal of such diseases sometimes--cures by faith healers, yoga, hypnosis, acupuncture, mountain spas, country walks or anything else that reduces stress and restores peace of mind. The beneficial effect of "dummy" medicine containing no medicine at all is well known and is called the placebo effect. In all probability conventional medicine, when it works, often works by this effect anyhow.

Once the stress is removed, the blood fats reduce, the blood viscosity lessens, and the oxygen transport to the cells improves. The oxygen supply may still be borderline but sufficient to reverse disease symptoms, and with hormonal balance restored, the immune system reactivates.

Although principles of natural health are against the use of drugs and medications, to eliminate or reduce stress is not as simple as changing the diet and giving up smoking. Therefore any possibility of benefit should not be rejected, and hence this reference to a substance called Eleutherococcus may be helpful. The information is from an article in *New Scientist* (21 August 1980) written by Dr Stephen Fulder.

Eleutherococcus is a substance derived from a plant called *Eleutherococcus senticosus* which belongs to the same family of plants as Ginseng. It is referred to as a drug but acts like a tonic in that it counters the effects of stress and improves mental processes, stamina and resistance without any adverse side effects. The active components of the substance are called glycosides meaning that the specific molecules are linked to sugar molecules.

Russian tests in which animals were severely stressed disclosed that damage to the stomach, spleen and thymus was largely absent from the treated animals. Ginseng, a Chinese herbal remedy, contains glycosides which are different to eleutherococcus glycosides, but which achieve similar benefits.

Dr Fulder added that similar results had been confirmed at the University of California in Los Angeles. Eleutherococcus is widely used throughout Russia in all manner of occupations which are stressful and was used by cosmonauts Vladimir Lyakhov and Valery Ryumin. It is used by Russian athletes, not only



when in competition, but throughout their constant training. It is also widely used in hospitals in the treatment of patients.

It should be clearly understood that stress-related disease conditions occur readily to people who are physically unfit due to bad diet and lack of exercise. People who suffer illness because of stress in their job, instead of claiming compensation and resorting to tonics, should get fit or get another job, maybe both.

## **Faith healing and hypnotherapy**

In his book, *Anatomy of an Illness*, Norman Cousins describes his recovery from ankylosing spondylitis, a disease of "unknown etiology" with a survival chance of one in 500. In a desperate bid to survive, Cousins rejected his drug therapy, hired a projector and amused himself watching old movie comedies. He was following a hunch he had acquired from reading Dr Selye's book *The Stress of Life*, and his changed state of mind, helped by laughter, improved diet and his own determination, was the turning point from which he recovered full health in a few months.

Faith healing is a subject of interest in all parts of the world. In one form or another, it is employed by primitive witch doctors and sophisticated physicians with all sorts of practitioners in between. Unquestionably, many people have benefited to some degree by its use in all sorts of cases which have defied medical treatment.

Just as stress is capable of disrupting hormonal production and balance, promoting disease of all kinds, so must the relief of stress have the opposite effect. Faith healing, and also hypnotherapy, appear to work exactly in this fashion. In addition, by removing "mental blocks" which may exist, recovery may sometimes be achieved from what appears to be a completely physical problem. Showmanship often forms part of the faith healing routine (probably a very important part), and dramatic cures have been claimed. Dr Louis Rose of England spent 15 years diligently investigating, with a completely open mind, the claims of many faith healers and their patients. His book, *Faith Healing* (Victor Gollancz Ltd) was published in 1968. He concluded that genuine improvement was achieved in many cases, but almost invariably the improvement was only temporary. He did not in all that time find one case which could be called a cure. It is known that of the millions of pilgrims to Lourdes in France over the years, only a handful of sufferers have achieved even temporary relief.

Cancer is one of the disease conditions tremendously influenced by stress of any kind. This is more fully discussed in Chapter 20.

Many doctors who are aware of the importance of psychological factors try and instil confidence and hope in their patients which they know will assist recovery. This concern for patients is a form of faith healing although only an accessory to conventional methods.

It is fairly plain why faith healing, at its best, can achieve only limited success. The alleviation of distress is enormously beneficial, but if only temporary, then the physical response will only be temporary. Stress is only one factor in the development of disease and if full recovery is to be achieved the factors of nutrition and physical exercise must also be corrected.

## **"Quacks"**

A quack is somebody who proclaims the ability to cure various diseases when in fact he cannot, and whose motive is to make money by callously exploiting sick people.

Milan Brych, the self proclaimed cancer specialist, achieved fame in New Zealand and later in the Cook Islands, having apparently achieved in some people, at least temporary remissions of cancer. Some of his patients have stoutly defended him because of the benefits they gave him credit for.

Brych was expelled from New Zealand, having been stripped of the medical status of a fully qualified doctor accorded to him in 1972 by the New Zealand medical authorities. It had been discovered that not only had he never received medical training, but had been in jail in Czechoslovakia on a charge of robbery at the time he claimed to have been in medical school.

How on earth did this man get his medical status approved and then practise as a cancer specialist in the Auckland Hospital? It would appear that the subject of cancer was not very well understood by the doctors who were later embarrassed. Two questions then arise: Was Brych a quack? Can orthodox medicine do any better?

The dividing line between a faith healer and a quack may sometimes be impossible to denote. How many quacks have found to their own surprise they have become accepted as faith heaters? And for that matter, how much did you spend on medicine last year? Did it work?

## **Can stress cause coronary heart disease?**

Note that the question relates to heart disease, not heart attack. Heart disease is a condition, whereas heart attack is an event. A heart attack is actually a symptom of heart disease. I have earlier included stress as a factor only insofar as it can aggravate cardiovascular disease (CVD)\* in conjunction with other factors. This represents one school of thought.

\*Cardiovascular disease and coronary heart disease can be considered as interchangeable terms.

However, Drs Meyer Friedman and Ray Rosenman of San Francisco are cardiologists who believe stress to be the main cause of coronary heart disease (CHD) if the stress is continuous. Their book, *Type A Behavior and Your Heart* is very interesting. "Type A" is the designation they apply to a person of drive and aggression with a constant sense of urgency to accomplish things, with never enough time. Such a person is under stress most of the time.

The reason Friedman and Rosenman reached their conclusion is that in testing many subjects they, time and again, found a much higher incidence of CHD and a higher incidence of heart attacks among type A subjects compared to type B subjects. Does this mean that the "type A" behavioral pattern (stress) is the main cause of CHD?

Here are several excerpts from their book:

1. "As a group, type A subjects show a higher serum cholesterol, a higher serum fat, more diabetic-like tracts or precursors, smoke more cigarettes, exercise less (because they cannot find the time to do so), are overdriving certain of their endocrine glands in a manner that can be expected to damage their coronary arteries, eat meals rich in cholesterol and animal fat, and also suffer more from high blood pressure than type B subjects."
2. "For example, most type A subjects not only exhibit a higher serum cholesterol level (as do our rats suffering from experimentally induced type A behavioral pattern) than type B subjects, they also take three to four times longer ridding their blood of dietary cholesterol after each meal than type B subjects. Thus the inner lining of their coronary arteries is exposed continuously to large amounts of cholesterol in its most dangerous form."
3. "Apparently because of the hypothalamus-induced over-stimulation of the sympathetic nervous system, excess insulin begins to accumulate in the blood. Now, of all known conditions that may lead to the disease of the coronary arteries, none is recognized as more devastating than any state associated with an excess of insulin in the blood."

## **Comments**

1. Leaving stress right out of it, the type A subjects referred to, simply by their diet, smoking and lack of exercise, would be expected to acquire severe heart disease.
2. The higher exhibited serum cholesterol levels stem largely from stressrelated cholesterol production

which in itself need not be harmful. However the prolonged exposure to dietary cholesterol would indeed present greater risk.

3. The reason for increased levels of insulin in the blood is that high blood fat levels prevent the normal interaction of insulin and glucose (blood sugar) and so the blood sugar level increases. In an effort to metabolize the sugar, the pancreas releases more insulin into the bloodstream, perhaps double the normal amount. If the body cannot produce sufficient insulin to "control" the sugar level, this is when the symptoms of diabetes appear. This explains the relationship between heart disease and diabetes. (See Chapter 21--Diabetes.)

Friedman and Rosenman are absolutely right in saying that type A stress is sometimes dangerous but it has not been shown that such stress is a major or common causative factor in cardiovascular disease. Dr Selye, probably the most experienced and informed researcher in the study of stress, was able to show in laboratory experiments with all kinds of animals, including monkeys, that an excess of stress hormones could cause severe cardiovascular disease throughout the body. In order to do so, however, it was necessary to administer large amounts of hormone and include large quantities of salt in the diet.

There is no doubt that under certain conditions stress could be considered a causative factor in heart disease but not frequently enough to be blamed for the common incidence of the disease in the general population.

When we consider heart attacks, which are not diseases, but events that occur to people who already have heart disease, then stress is a dangerous factor. In other words, stress may have had nothing to do with the formation of the disease, but much to do with triggering a heart attack.

## **Stress versus heart attack**

In the case of a person with CHD so severe the coronary arteries are almost closed, the effect of sudden or abnormal stress could trigger a heart attack. This is because, as I have explained, the effect of stress is to rapidly increase the viscosity of the blood so it cannot flow freely through the blocked section.

Thus if you have two people, one type A and one type B, both with the same degree of artery closure, and both subjected to the same stressful situation, the reaction of the type A may eventuate in heart attack, whereas the lesser reaction of the more placid type B may not be so likely to.

An interesting report from Dr Simon Rabkin of Canada, in the *American Medical News*, said the majority of fatal heart attacks occur on Mondays. Of the 3,893 cases studied, he found 75% of heart attack deaths among men at work, and 47% of those at home, occurred on a Monday. He thought that reintroduction of occupational stress after the weekend was the probable factor.

Stress is capable of causing a kind of heart attack known as ventricular fibrillation. Dr James Skinner, a neurophysiologist at the Baylor College of Medicine, said in three different studies it was found that 15% of people who drop dead of so-called heart attacks do not suffer any heart-related disease but die of ventricular fibrillation. He said it had been shown that a brain factor alone can cause this. "In the 1930s," said Dr Skinner, "Physiologist Walter Cannon travelled the world studying voodoo curse deaths in primitive cultures. His conclusion was that mental stress was sufficient to cause these deaths".

A Sydney newspaper report of 28 February, 1979 said:

"A man accused of a \$180,000 armed bank robbery died in the cells Yesterday while a District Criminal Court jury was considering its verdict at the end of his three-week trial. The man, 27 years old, collapsed in the cells of the Darlinghurst Courts and was taken to nearby St Vincents Hospital. He had suffered cardiac arrest and despite immediate treatment, had failed to respond."

## **Personality and diet**

Personality and diet are not unrelated.

A hyperactive child would, no doubt, be classified as a type A personality although the hyperactive behavior was caused by dietary factors.

Whether by comfort deriving from their religious beliefs or perhaps from their vegetarian diet, the Seventh Day Adventists at the Sydney Adventist Hospital seem all to be good-natured and friendly. Strangers passing in the corridors smile and say hello.

Other people say they feel less aggressive and more placid since becoming vegetarians.

It is possible that some "A Type" people on high meat, fat and sugar diets are basically placid folk whose type A behavior as well as their circulatory problems, are caused by the food they eat.

Other factors aside, there is no doubt that moderating a frantic lifestyle has benefited many people and extended their lifespan.

## **Funny stress**

"I can't find anything organically wrong with you," the doctor said. "As you know, many illnesses come from worry. You probably have some business or social problem that you should talk over with a good psychiatrist. A case similar to yours came to me only a few weeks ago. The man had a \$5,000 debt due and couldn't pay it. Because of his money problems, he had worried himself into a state of nervous exhaustion."

"And did you cure him?" asked the patient. "Yes," said the doctor. "I just told him to stop worrying, that life was too short to make himself sick over a scrap of paper. Now he's back to normal. He has stopped worrying entirely".

"Yes I know, " the patient replied sadly. "I'm the one he owes the \$5,000 to."

## CHAPTER NINE

# CHOLESTEROL AND TRIGLYCERIDES

*Cholesterol has wide renown, like Jekyll and like Hyde,  
Its behavior in your body depends upon just how it got inside,  
If your body makes it, in "H" and "LDL",  
It's absolutely natural and you'll get on very well.  
If on the other hand you eat it, in meat and eggs and cheese,  
It'll be in quite a dangerous form and clog your arteries.*

Both cholesterol and triglycerides are natural in the body and the blood and are harmful only when their natural levels become elevated. Their functions are quite different. Triglycerides (fats) are a source of fuel energy and are stored in fat cells in the body, being released as required into the bloodstream as free fatty acids. Cholesterol is a waxlike alcoholic substance which is soluble in certain body fats. It plays an important part in the body and in every body cell.

There are high levels of cholesterol in the tissues of the brain where it acts as an insulator separating the electro-chemical processes of the individual brain cells. Similar high levels are in the spinal cord. Cholesterol is required for the manufacture of certain hormones and is produced in various organs and in the body tissues themselves. The main center of production is the liver which converts much of it to bile salts essential for digestion and elimination. The involvement by cholesterol in the function of the nervous system is reflected by the significant increase in serum cholesterol which occurs with stress.

It is normal for a certain amount of this natural cholesterol to circulate in the bloodstream. This is called serum cholesterol and is transported in the blood as part of compounds called lipoproteins. There are several types of lipoproteins--alpha, beta, and pre-beta. The alpha and beta types predominate and are referred to as high density lipoproteins (HDL), and low-density lipoproteins (LDL), respectively.

The main cause of the generally elevated cholesterol levels in our society is cholesterol contained in the diet. It is this type of cholesterol, a low-density form, which is implicated in forming the arterial plaques in diseased arteries.

Another danger from this form of cholesterol is its effect of paralyzing macrophages, the large white cells of the body's immune system.

Serum cholesterol is measured in milligrams per hundred millilitres, expressed as mg/% or in millimoles per litre (mm/L). Figures in this book are in mg/%. Medical tests refer only to total cholesterol (both natural and dietary) and if they ever differentiate between HDL and LDL types, they refer to the ratio of HDL and LDL. A vigorously healthy, middle-aged, pure vegetarian can have a ratio of 1:05 with a total of 110 mg%, and a heart patient a ratio of 1:4.0 with a total of over 300 mg%.

Thus, regardless of the difference in total cholesterol, they each have about the same amount of natural HDL cholesterol. It is obvious then that high levels of total serum cholesterol are mainly due to increased low density cholesterol, with the body continuing to maintain much the same amount of HDL cholesterol.

Variations in HDL cholesterol do occur as a natural response to stress, as already mentioned.

Cholesterol is contained only in animal tissue or products derived from animals such as dairy food and eggs. If foods of animal origin are eaten, the cholesterol (which varies in different food items) enters the blood and results in an increased total level in the blood. The total level increases because the dietary cholesterol is in a form that the body does not want\* and so the body continues to manufacture its own "naturally packaged" cholesterol.

\*This applies to cholesterol consumed in cooked meat and fat but apparently not to cholesterol consumed in raw meat and fat, the difference being due to the more thorough digestive breakdown of the raw food by the natural enzymes it contains. This explains the relatively low serum cholesterol levels observed in primitive Eskimos and Masai natives discussed in later chapters.

How does dietary cholesterol get into the bloodstream? It is the task of the liver to receive nutrients from the intestines and store them, or use them or rearrange them so that the body can use them. However, fats and cholesterol, as commonly consumed, get different treatment.

Except for a small fraction, they don't go to the liver from the intestine at all, but are released into the lymphatic system, the cholesterol being "packaged" loosely in tiny particles of fat called chylomicrons--millions of them. You will recall that the lymph empties into the bloodstream in the veins at the base of the neck, and therefore so too do the millions of cholesterol-laden blobs of fat, in a dangerous form. They are low density. Drs Meyer Friedman and Ray Rosenman, the cardiologists and researchers referred to in the previous chapter have this to say:

"It must be clear to you that we sharply distinguish between the cholesterol that your body itself makes and that which comes from your food. It is not that we believe that the cholesterol molecules that your body makes are chemically different, but rather that body-made cholesterol is firmly packaged in a very soluble lipoprotein 'carton', whereas food-derived cholesterol is flimsily packaged in a fat-stuffed pellet. Let alpha lipoprotein cholesterol (which is made by the liver) escape from the blood and enter the wall lining of an artery, it will quickly return to the blood. But if a cholesterol-rich chylomicron makes the same type of escape, the cholesterol more often than not will remain indefinitely in the artery wall. This fact has been repeatedly demonstrated in the laboratory, and you might do well to remember it next time you hear a layman or even a doctor claim that the cholesterol the body makes is identical to that in the food as far as its potential for causing arterial damage is concerned. This statement is not simply untrue, it is dangerously untrue."

Further they say:

"But please note that it is necessary to feed cholesterol to these laboratory animals to create arterial plaques. We have the means to elevate the serum cholesterol level of animals tremendously by causing them to manufacture too much of their own cholesterol; yet under such circumstances they develop few or no arterial lesions. We believe that the explanation for this is that in the latter circumstances the excess cholesterol in the animals' blood is mostly in soluble lipoprotein forms. This is not the case with cholesterol in the blood put there as part of a high cholesterol diet. It enters the injured areas and stays there initiating the cancer-like process."

The body can handle a certain quantity of dietary cholesterol without harm (particularly if the food is consumed raw), as the liver finally restructures it or disposes of it. But as levels rise, that which cannot be disposed of is virtually forced into tissues throughout the body. Very high levels crystallize and form patches under the skin. Cholesterol even crystallizes in the tissues of the eyes and forms little white rings around the iris, called arcus senilis.

Polyunsaturated fat in the diet, while appearing to lower serum cholesterol, has the effect of causing high concentrations, via the liver, in the gall bladder where the cholesterol crystallizes to form gallstones.

The arteries of people eating the typical Western diet, high in animal protein, fat and cholesterol are constantly exposed to this contamination and suffer gradual disease.

Although blood fats (triglycerides) are involved in causing atherosclerosis, in some cases without the presence of cholesterol, the serum cholesterol level has been found to be an accurate indicator of the incidence of cardiovascular disease.

Seven-hundred and twenty-three subjects tested by the Cleveland clinic, all aged under 40, showed that with a cholesterol reading of less than 200 only one in five had significant artery closure. At levels of 225 to 250, 48% had closure, at 300 the incidence was 80%, and at 350 the incidence was 91 %.

The famous Framingham study showed that in 28-year-old men, of those with cholesterol levels of 140, only one in 200 had any degree of artery closure whereas at a level of 360, seven out of ten did. The death rate for those with cholesterol levels of 260 was four times higher than for those with levels of 220.

Whereas authorities in the USA have revised their ideas on what is an acceptable limit and have reduced the figure from 300 to 240, the Pritikin Longevity Center recommends 150 maximum.

Tests of 6,000 people in Helsinki, London, Oslo and Los Angeles compared groups on the typical American diet with a group on the American Heart Association (AHA) diet and a group on the AHA modified diet. The American diet contained 40% animal fat and 500-1000 mg of cholesterol per day. The AHA diet contained 40% fat (mainly polyunsaturated corn oil) and 300 mg of cholesterol. The AHA modified diet contained 24% fat and 200 mg of cholesterol.

Of the American diet group 100 people died. On the AHA diet 95 died but the group had a 50% higher cancer incidence and 200% higher gallstone incidence. Of the AHA modified diet group, 50 people died. fifty per cent is a big improvement, but as Nathan Pritikin says, if you are one of the 50% who dies, then that is a 100% result for you.

As described later, the recommended diet of the Pritikin Longevity Center in California contains less than 10% fat of any kind and less than 100 mg of cholesterol per day. For patients with advanced artery disease the center insists on an even stricter diet to ensure reversal of the atherosclerosis in the arteries. This is called the "regression diet" and contains no more than 5 mg of cholesterol. The diet is effective, particularly in association with a determined exercise program and over a period the blood cholesterol level eventually drops to 100-120 mg% as the body slowly discards its unwanted stores. Pritikin achieved this level (100) himself as he worked on reversing his cardiovascular disease.

Dr Lester Morrison of Los Angeles in his book, *The Low Fat Way to Health and Longer life* (1958) described a Mexican Indian woman of documented age 110 years. He said she was quite spry and repeated tests showed levels of 100 mg% with corresponding low levels of other fats. Her diet had been fruit, legumes and Indian corn. He remarked that her cholesterol level was probably the ideal.

In his new book, *The Aerobic Way*, Dr Kenneth Cooper refers to the famous Dr Atkins diet. He says that on his high protein, high fat, low carbohydrate diet, one of his patients lost 26 lbs in weight but at the same time, his cholesterol rose from 164 to 252! Cooper strongly advises against this diet.

Cooper himself at the time of writing his book was taking at least one glass of milk a day, 4-6 eggs a week, up to four meat meals a week as well as meals of fish or fowl. He eats butter occasionally and generally avoids fat. On this diet his cholesterol was 187 and triglycerides 41. He said he cannot maintain "such low levels" unless he runs 12-15 miles per week.

Here are some comparisons:

	Total Serum Cholesterol mg/%	mm/L
110-year-old Mexican Indian woman	100	2.56
68-year-old Nathan Pritikin (runner)	110	2.82
30-year-old SDA Health Educator, N. Keane (runner)	120	3.07
55-year-old SDA Dr G. Miller* (non-runner)	125	3.20
African Masai Tribesmen	130	3.33
Maximum desirable, Pritikin Longevity Center	150	3.85
Level below which artery plaques regress approx.	150	3.85

\*Seventh Day Adventist, Vegetarian

Dr Gerald S. Berensen of Louisiana State University School of Medicine surveyed the eating habits of 5,000 children up to the age of 17. A typical 10-year-old was found to consume 34% of his calories in snacks high in salt and sugar. He did a study with monkeys feeding them a diet similar to the typical children's diet. Some were fed diets high in salt but not high in sugar. These monkeys developed high blood pressure but the ones receiving both salt and sugar developed worse blood pressure. He said the effect of the sugar on the monkeys' cholesterol levels was as great as when the diet cholesterol was increased tenfold.

The people of the island of St Helena have a high rate of heart disease comparable to Western countries. Dr Yudkin points out that this is despite less fat in their diets and less smoking of cigarettes, and the greater amount of exercise in a hilly country with no cars. But he points out, their diet is high in sugar. In two of his studies in which coronary patients were compared with other patients by means of a careful questionnaire of their dietary habits, the coronary patients' mean daily sugar intake was 147 gm compared to the non-coronary patients' 70 gm.

Sugar depletes the body's supply of Vitamin B1 (Thiamine). A deficiency of Vitamin B1 will increase blood cholesterol and so will a deficiency of iodine. Quoting Dr Carlton Fredericks--"The efficacy of old-fashioned cod liver oil in reducing blood cholesterol has been traced not to its unsaturated fatty acid content, but to the iodine it supplies to the thyroid gland. Since an underactive thyroid will raise the blood cholesterol, it should be remembered that a chronic mild deficiency of Vitamin B1 so easily possible in a sugar-saturated public, can cause thyroid under-activity and consequent elevation of blood cholesterol even in the absence of a high cholesterol diet".

Dr Milton Winitz in a study funded by the national Aeronautics and Space Administration (NASA) observed interesting differences between sucrose (refined sugar) and glucose in the diet. Eighteen healthy young adults were fed a chemical diet composed of glucose, adequate amino acids, vitamins, minerals and ethyl linoleate as a source of essential fat. After four weeks on this diet, 25% of the glucose was replaced



by the equal amount of sucrose. In the next three weeks there was a progressive increase in total blood cholesterol from a mean average of 160 mg% to 200. Then the sucrose was exchanged with glucose again and in one week the mean average cholesterol level fell to 175 and finally to 151 at the end of the 19 week experiment. The constituents of this diet were meticulously measured of course, and the subjects' weights were constant.

In tests, rats fed an ordinary diet had a cholesterol level of 59 and triglycerides 37. When sugar was added, the cholesterol level increased to 61 (3% increase) and the triglycerides increased to 53 (70% increase). The same rats on a high fat and cholesterol diet increased their cholesterol level to 577 and triglycerides to 144. When sugar was added, the already high level rose more, cholesterol to 787 (36%) and triglycerides to 262 (82%).

Sugar in the diet does not always produce an increase of blood cholesterol and, as Dr Fredericks says, would appear to do so when the sugar affects the operation of the thyroid gland. This could depend on other dietary factors as well. However, triglycerides always increase with sugar intake. When cholesterol does increase in such a case, it would not be of the dietary kind but "body-made" and therefore perhaps not harmful. Dr Yudkin would therefore be correct in placing the major emphasis on elevated triglycerides as sugar's implication in cardiovascular disease.

Physical endurance (aerobic) exercise can temporarily be accompanied by increased cholesterol levels because of the temporary stress, but the long-term effect of regular exercise is to lower blood cholesterol levels. The director of the Pritikin Longevity Center, Nathan Pritikin, was one of the busiest men I ever met. He worked a 12 hour day (excluding meal breaks and daily running), seven days a week. His work was demanding, he ran 4-6 miles a day and his only entertainment was maybe a movie every three months. His cholesterol was 110 mg%, triglycerides 40 mg%.

## **Cholesterol-lowering drugs**

Drugs such as thyroid hormone and Atromid S will lower total cholesterol in the blood but result in higher death rates of patients. This no doubt results from lowering the "good" body-made cholesterol and not the bad "dietary" cholesterol.

## **Summary of cholesterol**

1. There are two significant forms in which cholesterol appears in the bloodstream, that which is contained in high density lipoproteins (HDL form) and that which is contained in low density lipoproteins. (LDL). Natural body cholesterol is largely in HDL, dietary cholesterol in LDL form. In blood tests, the reading usually made is that of the total cholesterol.
2. The only foods that contain cholesterol are those of animal origin such as meat, fish, shellfish, chicken, dairy produce and egg. Brains and egg yolks are extremely high. Egg whites are cholesterol free.
3. People whose diets contain no cholesterol, no refined carbohydrates, who are reasonably free of stress and are physically fit, have blood cholesterol levels as low as 100 mg%, predominantly the HDL type.
4. Without cholesterol in the diet, refined carbohydrates, such as sugar and alcohol, not only raise the level of triglycerides in the blood, but may also cause the body to increase production of its natural cholesterol, thus increasing the total level in the blood. Refined carbohydrates and caffeine actually cause stress in the body.
5. Increased levels of triglycerides in the blood together with the increase in body production of cholesterol, also occur as a natural effect of stress and both vary in proportion to the stimulus.
6. Cholesterol contained in the typical Western diet, particularly in association with fat of any kind, enters the bloodstream directly upon digestion in a dangerous form. It readily enters the various tissues of the body. Dietary cholesterol is responsible for elevating total blood cholesterol to statistically dangerous levels. Physically fit people, while still adversely affected by dietary cholesterol, are affected to a somewhat lesser degree because of their more efficient metabolism of

dietary fat.

7. The combination of fat and cholesterol occurs in dangerously high levels in the typical American diet and almost guarantees cardiovascular disease, particularly in combination with high levels of sugar-induced triglycerides.
8. Correction of diet results in an initial rapid reduction of blood cholesterol with a continuing slow reduction as the body gradually eliminates cholesterol from the body tissues (including the arteries).
9. Whereas some authorities refer to HDL as being beneficial and LDL as being adverse, and speak of favorable ratios of HDL to LDL, this is only partly correct. It is certainly favorable to reduce LDL cholesterol by correcting the diet, but certainly not favorable to increase HDL by consuming sugar or alcohol. Less favorable again, and indeed most unfavorable, is it to reduce total cholesterol by drugs which reduce natural cholesterol.

## **The conclusion on cholesterol**

The argument about dietary cholesterol being a health hazard or not has been going on for many years. Despite the weight of evidence against cholesterol, certain sections of the food industry and the medical industry have kept the argument alive, and of course gourmets all over the world have hoped cholesterol would one day be exonerated. This hope has been finally shattered and the issue decided beyond all doubt by the findings (January 1984) of the \$150 million ten-year trial by the National Heart, Lung and Blood Institute, whereby it was shown that reduction of cholesterol levels in the body, whether achieved by diet or drugs, significantly reduced the incidence of heart disease and heart attacks. The study was called "the Coronary Primary Prevention Trial".

Unfortunately the findings still present a misleading picture. They indicate that a much greater reduction in cholesterol is achieved by drugs than by diet, and this conclusion is absolutely wrong. The so-called low-cholesterol diet used in the study was nowhere near strict enough and achieved a drop in cholesterol of only 4% compared to a 12.5% drop obtained by diet and drugs combined. This is piffling--because Nathan Pritikin, using his Regression diet, drops his patients' cholesterol by 29% in four weeks--entirely by diet!

Another piece of information not mentioned in the dramatic news release was the fact that the cholesterol-lowering drugs had many bad side effects, were difficult to take, and required a lot of fluids, which indicates toxic repercussions within the body. The side effects were: gas, nausea, bloating, constipation and other gastro-intestinal discomforts which caused one-third of the study subjects to abandon the drugs before the study ended. (See also *Drug control of blood pressure and cholesterol*, Chapter 12.)

## CHAPTER TEN

# THE CARDIOVASCULAR SYSTEM LIPOTOXEMIA AND CARDIOVASCULAR DISEASE\*

\*Cardiovascular disease as it specifically affects the coronary arteries of the heart is sometimes called Coronary Heart Disease (CHD). It should be understood that heart disease is a condition developed over a long period, not to be confused with a heart attack which is an event, occurring usually as a result of severe CHD.

*A man is as old as his arteries.*

Thomas Sydenham, 17th Century physician

*A man's arteries are as old as he makes them.*

Robert Bell MD, 19th Century physician

While true that a man is "as old as his arteries", equally true is that his health is only as good as the health of his blood. The bloodstream is known as the "river of life", and it is the purity of this river which determines, almost entirely, the health--mental and physical--of the individual.

If the condition of the blood declines, so will health decline--all the way from vague "indisposition" and head colds, to eventual heart disease and cancer.

Blood is a complex fluid which performs many functions. Apart from nourishing and cleansing the billions of cells of which our bodies are made, and providing them with oxygen, it conveys hormones and other vital substances, transports protective white cells of the immune system, initiates the healing of wounds, cools active muscles and provides water for perspiration. Its composition constantly changes to meet the demands of the body.

The word "cardio" relates of course to the heart, and "vascular" relates to blood vessels. The entire system is sometimes simply referred to as the "circulation".

The heart is often referred to as "the pump". In fact it comprises two pumps, side by side, the chambers of which are rhythmically squeezed by muscle tissue surrounding them to provide the pumping action. The pressure chambers which propel the blood are called the ventricles.

The left-hand pump is more powerful than the right and its job is to receive blood from the lungs, freshly charged with oxygen, and eject it into the main arteries for its journey to supply every part of the body with oxygen and nutrients.

The heart muscle gets its supply of blood directly from the left ventricle via the aorta and the coronary

arteries which surmount the heart from the top like a crown, thus deriving the name coronary.

The artery system branches off to all parts of the body, splitting into smaller and smaller tributaries, into tiny arterioles, and finally into the minute capillaries, which are so fine (1/50,000 of an inch) and so numerous that their total length in an adult has been estimated at 60,000 miles.

The walls of all these blood vessels incorporate muscle tissue which automatically contract or dilate the vessels to control the blood flow according to varying requirements in different parts of the body. As the blood passes through the capillaries it transfers oxygen and nutrients to the cells, and at the same time, picks up waste products for elimination, carbon dioxide to be eliminated by the lungs, and other wastes by the liver, the kidneys and the urine.

When it leaves the heart the blood is bright red in color, but on its return it is rather a dark red as it is no longer as rich in oxygen. For protection, the arteries are located deep in the body tissue, but the veins which carry the returning blood at very low pressure lie near the surface and you can see them in your arms and hands. They took dark in color because venous blood is dark. The veins connect their branches and carry the "used" blood back to the heart again, this time to the smaller pump, which pumps it through the lungs where it unloads its carbon dioxide and picks up more oxygen. Then back it goes to the big pump again for another trip around the body.

With every beat, a small portion of the entire blood supply is sent on its way and the entire ten pints or so keep constantly circulating. The arteries flex with the passage of each little "wave" and this can be felt in the neck or wrist as the "pulse". If the heartbeat is irregular, fast or slow, so then will be the pulse. The flexing of the arteries smooths out the flow of blood so that by the time it reaches the tiny vessels, the flow is constant and comparatively slow.

On its way around the body, the blood picks up nutrients from the intestines and the liver, hormones from the glands, and drops off waste products for elimination as mentioned.

The initial blood pressure is barely sufficient to propel the blood all the way around the circuit and back to the heart again, especially back from the lower limbs. The return of blood from the lower extremities is ensured by the veins themselves acting as pumps. The veins incorporate numerous tiny valves which allow the blood to flow only one way--upwards, back to the heart. Movement of adjacent muscles squeezes against the veins and propels the blood along. Similar squeezing occurs from adjacent arteries as they expand with each "pulse" of arterial blood. Sometimes guardsmen, standing motionless on parade, will faint when a large quantity of blood pools in their legs so that the heart is short of blood to supply the brain. Blood return from the lower body is further assisted by movement of the diaphragm which is in constant motion as you breathe. These additional pumping accessories are particularly important during vigorous exercise.

Blood pressure is measured from an inflated pad wrapped around the upper arm because it is convenient and close to the heart. The pressure becomes less and less as the vessels become smaller. Pressure is maintained all the way around but is nearly zero by the time the blood returns to the heart. Blood pressure is measured in millimetres of mercury, and is expressed as two figures, eg 120/80 (a good reading). The higher figure (systolic) is the pressure attained as the heart pumps, the lower (diastolic) is the minimum pressure between beats. The reading should be made with the subject rested and relaxed because ordinary mild activity or eating will cause an increase and give a misleading impression.

"Normal" standards allow for gradual increase as one gets older. It is commonly believed that an acceptable systolic pressure is "100 plus your age". This figure indeed is almost the general standard because, unfortunately, everybody on a typical Western diet, in blissful ignorance, has blood of high viscosity and slowly blocking arteries, and the heart must pump at a higher pressure to circulate the blood. Generally, a figure below 140/90 is accepted as normal. These figures are unrealistically high. A really physically fit person will maintain the optimum pressure throughout life.

As the body's activity changes, so blood supply requirements of cells in the different parts of the body change. The muscular walls of tiny arteries, the arterioles, expand and contract as required, directed

automatically by the nervous system. Not all are open at one time. Control of blood flow also accomplishes dissipation of excess heat generated by the muscles by directing flow through the skin.

## **The lymphatic system**

Not all of the blood returns from the capillaries by way of the veins. Blood plasma is the clear liquid portion of the blood and some of this leaves the blood through the capillary walls and circulates around the cells, transferring nutrients to them and receiving their wastes. This fluid is called lymph.

The red blood cells which carry the oxygen do not leave the capillaries. Most of the lymph re-enters the capillaries and rejoins the bloodstream, but the remainder returns in a different network of vessels altogether. This network is called the lymphatic system and flows one way only. The lymph's function is to cleanse, and at intervals along the lymph vessels are lymph glands which produce white cells to destroy bacteria, abnormal cells or other foreign substances. The lymph glands or "nodes" also filter harmful substances from the lymph fluid and supply it with the protective white blood cells.

As the lymph vessels are not directly connected with the main circulation, the only pressure available to propel the lymph in its flow is that provided by the pulsations of adjacent arteries and by various muscular movements which provide a squeezing action. The lymph vessels are just like veins and have the same system of valves which ensures the one-way flow of lymph back to the heart.

The main lymphatic vessels connect to the main veins at the base of the neck and so the lymph re-enters the bloodstream to become part of the blood again before it re-enters the heart.

The lymphatic system is involved with the digestion of fats and this is described in the chapter on nutrition, Chapter 15.

## **Cardiovascular disease**

Good health and a good life expectancy depend on an efficient cardiovascular system. The basic essentials are:

1. A strong healthy heart.
2. Clean, free-flowing blood.
3. Clean, flexible blood vessels.

*The heart:* The heart has a nervous system of its own which co-ordinates the muscle contractions to provide the pumping action. Over-riding this system is the body's central nervous system which directs not only the heart rate, but the depth of stroke as well. The depth of stroke means the quantity of blood ejected at each stroke. Thus the output is adjusted to provide the demands of the body. These vary widely from the requirements when asleep, to a maximum of extreme physical exertion. Just to digest a meal requires a substantial blood supply to the digestive organs. Mental effort or stress calls for more blood.

The constant work of the heart is no strain upon it, it remains strong and works uncomplainingly as long as its arteries continue to supply it sufficiently with blood.

*The condition of the blood:* The second factor determining the efficiency of the cardiovascular system is the condition of the blood. Toxemia is a condition of the blood when it contains undesirable amounts of toxic substances, and when toxemia is accompanied by high levels of fat and cholesterol, the condition is called lipotoxemia. (Lipids are fats.)

Viscosity means the degree of stickiness of a liquid. The viscosity of healthy blood is low, permitting it to flow freely.

The condition of the blood is affected by the following factors:

- i. Excess cholesterol and fat, together with various waste products due mainly to wrong diet, circulate in the bloodstream like sludge and gradually deposit in the artery walls. Fat causes the red cells to aggregate or clump together, seriously reducing their oxygen-carrying capacity. Tiny particles called platelets whose function is to clot the blood in the event of injury, also stick together. The effect of this clumping is to increase the blood viscosity, it becomes thick and sluggish and cannot flow freely, particularly in constricted vessels. This often causes drowsiness after heavy meals or perhaps angina or heart attack. Angina pain is frequently mistaken for indigestion. When red cells bunch together and block capillary vessels, clear fluid of the blood is forced out of the capillary walls and causes the tissues to swell. This condition is called "edema".
- ii. Toxins produced in the colon from putrefying food residues when constipation exists enter the bloodstream from the bile circulation, the condition being known as "auto-intoxication".
- iii. Alcohol also causes red corpuscles to clump together, and immobilizes certain enzymes preventing oxygen exchange to cells. After eight hours' sleep following a "binge", not only is the heart pounding, but the rate is elevated by 20 beats a minute or more. Alcohol elevates blood triglycerides, destroys valuable nutrients, and immobilizes enzymes.
- iv. Hypoglycemia--low blood sugar. This is caused mainly by eating excess protein and refined carbohydrates such as sugar, sweets, soft drinks etc. and results in chronic fatigue. Hypoglycemia is described in Chapter 21.
- v. Smoking. Apart from the adverse effect on the lungs and nervous system, the worst harm from smoking is due to carbon monoxide, a poisonous gas, which is picked up by the red corpuscles, displacing oxygen in the bloodstream. Dr Eliot of Florida reported that smoking can reduce the blood's oxygen-carrying capacity by up to 20%. It also destroys Vitamin C which is important in oxygen transport. Nicotine affects the nervous system causing free fatty acids to be released into the blood. At the same time it causes arteries to constrict and the heart rate steps up. Thus nicotine has a similar effect to stress. More red blood cells enter the blood from the body's reserves to compensate for the ones that are poisoned and this further increases the blood viscosity.
- vi. Stress. A reasonable degree of stress is normal in day-to-day activities. It has the effect of increasing blood pressure and the levels of certain hormones and fatty acids in the blood to provide for the anticipated activity associated in nature with stress. If the bloodstream is already thick and turbid, the viscosity will further increase, in which case this perfectly normal process can be dangerous.
- vii. Thyroid deficiency. An underactive thyroid due perhaps to a deficiency of iodine or Vitamin B1 (sugar can deplete this vitamin) reduces the metabolism of fat, thus increasing blood fat levels and also increasing blood cholesterol. Excess protein in the diet can also deplete the body of thyroxine.
- viii. Physical fitness. Although subject to the foregoing adverse factors of an incorrect lifestyle, the blood of a fit person does not suffer the degree of toxemia as that of an unfit person, because of the better metabolism of a physically fit body. Blood viscosity is always measurably less in athletes, regardless of diet.
- ix. Sunlight. Direct exposure to sunlight has an effect similar to that of physical exercise; blood fats and cholesterol reduce, blood viscosity lessens and oxygen levels increase, in addition to which hormone production improves and general metabolism becomes more efficient.

Considering these factors, it does not take much imagination to realize how vital they are to a person with arteries almost closed with atherosclerosis.

*The condition of the arteries:* Whereas the condition of the blood can vary from day to day, and if bad, can be rapidly rectified, the degeneration of the vascular system is a long process usually commencing in early childhood and continuing at a rate determined by living habits, primarily diet.

The disease affects vessels throughout the body, and the early symptoms, which are plain to see, cause no great distress and indeed are considered normal. These may be in the form of "mildly" elevated blood pressure, gradual loss of high frequency hearing, or the requirement to wear reading glasses. When the arteries of the heart are affected specifically, the condition is called heart disease or coronary heart disease.

Hardening of the arteries was once the most common form of cardiovascular disease, and is called arteriosclerosis. The hardening is caused by deposits of calcium and other insoluble minerals absorbed into the artery walls so that elasticity is lost and the artery gradually blocks, closing off the flow of blood. This condition can eventuate from a diet containing little or no cholesterol but excessive amounts of

vegetable protein, mineral salts and fat, contained in cereals and nuts.

To a lesser extent, arteriosclerosis can be caused by changes in blood composition brought about by excessive adrenal secretions. Such excessive secretions are caused by stress and the stress effects of nicotine, alcohol and sugar.

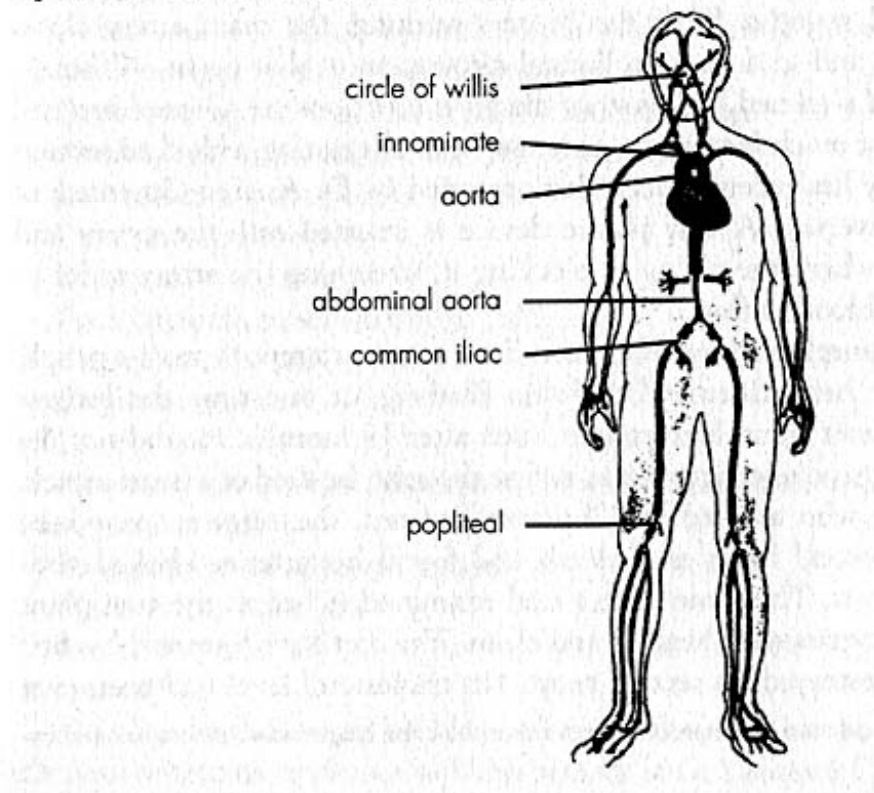
The most common form of artery disease today is different. Instead of the long-term hardening process once synonymous with old age, a more rapid process called atherosclerosis occurs, affecting people much earlier in life. The name derives from the word atheroma, the Greek word for porridge, which describes the build-up of fat, cholesterol and fibrin in the artery lining which occurs with or without calcium and other minerals.

Thyroid deficiency, as mentioned, can adversely affect fat metabolism and lead to artery degeneration. Dr Broda Barnes, MD, PhD, author of *Solved: The Riddle of Heart Attacks* (Robinson Press, Fort Collins, Colorado, 1976), contends that thyroid deficiency is the prime cause of atherosclerosis. He points out that removal of the thyroid gland in animals or humans soon leads to atherosclerosis and that administration of thyroid hormone will retard or prevent this process. Dr Barnes contends also that thyroid deficiency is far more common than is suspected and to a large extent is due to the demands placed upon the body by a high protein diet.

The fact remains that one way or another, artery disease as we know it today is caused by our high protein, high cholesterol, high fat Western diet.

The arteries become diseased more often where there is a bend or a branch, and there are a number of such points in particular where blockages commonly occur (see Fig. 10.1). As the disease progresses, the body degenerates further and more serious symptoms such as kidney failure, strokes, angina or heart attack may occur.

Figure 10.1 Common sites of atherosclerotic lesion



The disease process is gradual and insidious, beginning at first as creamy streaks on the artery walls as cholesterol and fat begin to be deposited in the cells. The arteries' inner lining and the muscle layer next to it have no capillaries of their own and rely on oxygen transferred directly from the main bloodstream through the lining. With continuing high levels of dietary fat and cholesterol in the blood, more and more are absorbed into the artery walls.

The process originates more frequently in places where deterioration has occurred in the artery walls, and research has indicated that such deterioration may be caused by a deficiency of Vitamin C resulting in lessened integrity of the collagen binding the artery's cells together. Smoking, by destroying Vitamin C, is not only deleterious to the blood but also to the condition of the arteries. The cells eventually become engorged and begin to burst. As the body attempts to heal the damaged area, new cell growth occurs, and together with fibrous tissue, a plaque is formed in the artery wall. With further deposits, the artery gradually closes, restricting the blood flow. The blood pressure increases in order to keep up an adequate flow of blood.

As the condition worsens, the artery may lose elasticity, further increasing resistance to the blood flow. Sometimes calcium forms part of the deposits and the artery hardens like a clay pipe. This effect can result from excess protein in the diet which causes leaching of calcium from the bones. It also results from smoking.

The plaques, like little abscesses, protrude from the artery walls interfering further with the blood flow. They may be isolated or numerous, affecting the artery in varying degrees.

When the heart's own coronary arteries become badly blocked, perhaps 90-95% closed, severe coronary insufficiency occurs. In this precarious condition, relatively minor factors affecting blood viscosity can easily trigger a heart attack. Some heart attacks are caused by a piece of plaque becoming detached causing a blockage downstream from the diseased area.

The fantastic ability of the body to adapt and protect itself enables tiny new vessels to grow around the obstructions in the artery and keep a limited blood flow going. This is called collateral circulation and has enabled people to survive even with their three coronary arteries totally blocked. A surgical means to alleviate distress caused by blocked arteries is to take a vein from another part of the body and graft it to each side of a blocked section to form what is called a by-pass.\* Some people have a "triple by-pass" which means one on each of the main coronary arteries, and so the supply to the heart is restored. Unfortunately, about 8% of patients die within 30 days, and on an unchanged diet the new vessels acquire atherosclerosis much faster than natural arteries. Twenty per cent close in 12 months. With the by-pass working, the main artery closes completely and so does its collateral circulation at that point. Although initial relief is gained, unless strict dietary corrections are adopted survival rates are not much better. Another means of alleviating a blocked section of an artery has recently been demonstrated by Dr Andrea Gruentzig of Zurich University. A tiny plastic device is inserted into the artery and positioned where the plaque is blocking it, stretching the artery wider to permit the blood to flow.

\*Collateral circulation assists trouble spots other than the heart and so too do surgical bypasses.

Heart transplants have also been done in an attempt to rescue people with severe heart disease. Dr Phillip Blaiberg, at one time the longest surviving heart transplant patient, died after 19 months. He did not die because of tissue rejection as was at first thought, he died of a heart attack. The doctor who assisted Dr Christian Barnard, the surgeon, examined Blaiberg's second heart after death and found his arteries choked with atherosclerosis. The same doctor had examined it before the transplant when the arteries were healthy and clean. The diet that destroyed his first heart had destroyed his second heart. His cholesterol level had been over 300 mg% (7.7 mm/l) constantly, an extremely dangerous level for anybody.

Smoking, by its effect on the nervous system, tends to constrict vessels. Long periods of inactivity cause the automatic operation of the capillaries to become sluggish in some parts of the body, resulting in circulation impairment and increased blood pressure. Alcohol immobilizes enzymes in tissues for long periods, preventing release of oxygen to the cells.

*Obesity:* Excess body tissue in overweight people depletes the efficiency of the cardiovascular system for the following reasons:

1. Useless tissue must be supplied with blood, adding to the heart's workload.
2. "Deadweight" equivalent to carrying a load of bricks everywhere adds further to the heart's workload and discourages physical exercise which is vitally important.
3. Excess fat is readily released into the bloodstream.



4. Sagging of vital organs hinders circulation and impairs the function of the lungs.

## **General signs of advancing cardiovascular disease**

Premature aging, blotchy skin.

Florid face.

Arcus senilis (a lightly colored ring around the iris of the eye).

Deteriorating eyesight, loss of peripheral vision.

Deteriorating hearing, loss of high frequency range.

Slowing reactions, vagueness, lack of stamina.

Low resistance to infection, colds.

Drowsiness after eating.

Dizziness on exertion.

Poor circulation, sensitivity to cold.

Shortness of breath.

Swollen tissues.

Leg pains.

Angina (pain in chest, perhaps in arms, after meals or on exertion but sometimes at rest).

Sweating for no apparent reason.

High resting pulse rate.

Increased thirst and appetite and rapid loss of body water (diabetic symptoms).

Do not take these signs lightly just because they may not be regarded as clinical symptoms, and note well this remark of Dr Kenneth Cooper: "you have to keep in mind that the most common first symptom of severe underlying heart disease is sudden death. For a lot of people that's the only symptom they will ever have".

## **The causes of cardiovascular disease summarized**

Cardiovascular disease is caused by lipotoxemia which is a condition of the blood involving high blood fat and cholesterol levels. The viscosity of the blood increases, the oxygen-carrying capability decreases, and blood pressure increases. Cholesterol, fats, fibrin and sometimes calcium permeate the artery walls, as the deposits build up, the artery closes off blocking the flow of blood. The fatty substance is called atheroma, and the condition is atherosclerosis.

The condition arises from improper diet but is enhanced by smoking, alcohol, lack of exercise and to a lesser extent caffeine, unremitting stress and lack of rest.

The dietary substances most to blame are meat and other flesh foods, eggs and dairy products, all of which contain excessive amounts of fat, cholesterol and protein. A full description is given in Chapter 15.

## **Hypertension and heredity**

*Hypertension:* Note that high blood pressure (hypertension) has not been listed as a cause of cardiovascular disease. It is often a symptom (particularly when the kidneys are affected) as will be explained later. High blood pressure may occur without the presence of atherosclerosis, and atherosclerosis may occur without high blood pressure.

The Japanese have the highest hypertension rate in the world, thought to be due to their heavy intake of salt, but have a low incidence of heart disease.

*Heredity:* It is easy to see why heredity sometimes appears to be a factor in cardiovascular disease. But all degenerative diseases stem from poor living habits, and bad dietary habits are passed from generation to generation. They can be disastrous to a family, but they are not inherited. When people leave their family, migrate and adopt a different lifestyle, then regardless of their family back in Ireland, Japan, Yemen or the

New Guinea Highlands, they, just like McCarrison's rats and laboratory monkeys, acquire the characteristic effects of their new lifestyle.

However, as described in Chapter 8, heredity can influence the chance of a heart attack once a person has advanced cardiovascular disease and is all "set up" for one. This is by virtue of their personality which is inherited.

Heredity appeared to be a factor in the case of my wife's heart disease which was described in Chapter 2. All her four brothers had heart attacks, three fatal. Of her two sisters one died of heart disease and stroke and the other of cancer. All occurred between the ages of 37 and 58.

Notwithstanding such a disastrous family history and her failure to adopt an exercise program, she is now in better health than ever before and her physician's report substantiates this fact. She has changed her lifestyle. If she had inherited a stronger will she could have made better progress as she will not rigidly follow her program.

## **The protective effect of raw food**

The high consumption of meat and dairy products is undoubtedly the major cause of atherosclerosis in modern times. However, long research by Dr Edward Howell indicates that the animal protein, fat and cholesterol contained in meat and dairy products are far less harmful if these foods are consumed raw.

Raw meat contains the proteolytic enzyme cathepsin and the fat-digesting enzyme adipose lipase. All animal fats, raw, contain lipase. When animal protein or fat is consumed raw, the enzymes accomplish a certain amount of predigestion in the cardiac (upper) stomach before being inactivated by the stomach acid further down, and so the final digestion of these substances in the intestine is more complete and they are assimilated in a relatively harmless form.

It has always perplexed nutritionists how primitive Eskimos and Masai natives could maintain good health as long as they do on diets consisting of almost lethal quantities of animal protein and fat. The answer to that puzzle, according to Dr Howell, is that apart from other lifestyle factors in their favor, these people, like the wild carnivorous animals, eat most of their food raw. (The name Eskimo is derived from the Cree Indian expression: "he eats meat raw".)

Dr Howell blames the cooking of food for practically every disease known to man. He points out that raw milk, containing 35 different enzymes, is an entirely different substance to the pasteurized dairy products of today, which are known to contribute to atherosclerosis. In his paper, "Lipase versus Cholesterol" (1983), Dr Howell says:

"Lipase is destroyed by cooking. Could it be that the bad reputation of cholesterol starts in the human digestive tract when fat, divorced from its lipase companion, is forced to remain idle and unaltered in the stomach during the period of 2 or 3 or more hours after it is swallowed? While ptyalin and then pepsin digest carbohydrate and protein in the stomach, lipase is absent and fat cannot be digested. But when fat is eaten raw, with its lipase undamaged by heat, it also can be digested in the upper stomach prior to the time the acidity becomes strong enough to prevent further action.

"When unaltered fat, deprived of its lipase companion, must confront strong hydrochloric acid in the human stomach, it faces a new and harsh experience. It may be left with a structural defect, or impairment with some undesirable trademark that prevents it from being properly digested in the intestine and hence improperly metabolized when it reaches the body tissues later. It must be remembered that in both animals and humans, it is impossible to prevent fat plus lipase from engaging in initial digestion during the first hour in the stomach.

"It has been shown that even ptyalin, which is more effective on starch near neutral pH, digests in the cardiac and fundic portion of the stomach for a period approaching an hour. The lipase associated with fat, in common with other food enzymes, has a pH optimum further down on the acid side of the pH scale,

and therefore can be expected to digest fat in the upper stomach (the food-enzyme stomach) for a period at least as long as ptyalin can work on starch. This happens every day in the stomachs of millions of wild animals, and for epochal periods before the cooking era, evolution contrived to make it a regular scheduled event in the human stomach. It appears, therefore, that fat is being denied its traditional digestive rites during its passage along the digestive tract. And this may well be the reason that animals and humans, eating raw fat with its lipase, are immune to cardiovascular disease. Thus a strong reason emerges why research to explore this promising area is long overdue and merits top priority for allocation of research funds."

To conclude on cardiovascular disease, here are two extracts from *Lifestyles, Major Risk Factors, Proof and Public Policy* by Jeremiah Stamler MD in his George Lyman Duff Memorial Lecture, 1977:\*

\*The paper originates from the department of Community Health and Preventive Medicine, North-western Medical School, Chicago, and appears in *Circulation*, Vol. 58, No. 11 July 1978.

1. "An additional comparison has recently become available, with data on mortality, for three groups of Californian Seventh Day Adventists (nonvegetarian, lacto-ovo-vegetarians-- vegetarians who eat milk, cheese and eggs--and pure vegetarian) compared with the Californian general population. Seventh Day Adventists have lower mean serum cholesterol levels than Americans generally. For 47,000 Seventh Day Adventist men aged 35 and over, age-sex-standardized, mortality rates were 34 per cent lower for non-vegetarians, 57 per cent lower for the lacto-ovovegetarians and 77 per cent lower for the pure vegetarians compared to the general population. Seventh Day Adventists differ from the general population in other respects as well, eg. abstinence from both alcohol and tobacco."
2. "Since the data from both animal and human studies indicate that high blood pressure and cigarette smoking are minimally significant for atherogenesis in the absence of the nutritional metabolic prerequisites, it is further reasonable and sound to designate 'rich' diet as a PRIMARY, ESSENTIAL, NECESSARY CAUSE of the current epidemic of premature atherosclerotic disease raging in the Western industrialized countries. Cigarette smoking and hypertension are important secondary or complementary causes."

## CHAPTER ELEVEN

# BLOOD VISCOSITY AS A FACTOR IN ALL METABOLIC DISEASES

*It's said that blood is thicker than water (sometimes more so than it oughta!)*

Blood is a wonderful and complex substance containing many chemical compounds to perform many functions. It constantly changes and adapts to meet the body's requirements. Healthy blood varies in viscosity as it flows normally and becomes much "thinner" by the time it reaches the capillaries. It can even change viscosity locally at a given point in order to pass through a constriction.

As described in Chapter 8, the viscosity of blood is quickly increased by stress, and continuous stress will maintain the condition. Severely affecting blood viscosity too is a diet containing fat, cholesterol, refined carbohydrates, coffee, alcohol and excessive amounts of animal protein. Removal of these foods from the diet enables the blood to clear in several days, but because most people consume these foods constantly, their blood is always polluted and viscous.

Since 1852 when Dr A. Coccius published data on microscope observations of agglutinated blood in living human patients, many other studies have been made but unfortunately their significance has not been appreciated. Dr Leopold Dintenfas of Sydney Hospital has studied blood viscosity for over 20 years and is just beginning to convince the medical profession that high blood viscosity is a disease factor. Dr Dintenfas is the Director of Hemorhology and Biorheology Department, University of Sydney. He is the author of *Blood Micro-rheology Viscosity Factors in Blood Flow, Ischemia and Thrombosis* (1971 Butterworth Press), *Rheology of Blood in Diagnostic and Preventive Medicine*, (1976 Butterworth Press), *Hyperactivity and Hypertension and Blood Viscosity in Heart Disease and Cancer* (1981 Pergamon Press) plus numerous medical papers published throughout the world.

High blood viscosity invariably accompanies degenerative diseases. The factors that effect blood viscosity are: plasma viscosity, aggregation of red cells, internal viscosity of red cells, hemoconcentration, aggregation of platelets, and concentration of white cells.

Quoting Dr Dintenfas:

"The high viscosity syndrome can contain one, two, or more of these elements. Capillary occlusion, stasis hypoxia, acidosis, necrosis and infarction are inevitable, although not necessarily irreversible steps in this process.

"It would be worthwhile to note that osteoarthritis and rheumatoid arthritis are associated with an elevation of plasma viscosity (Houston et al 1949--Gasen et al 1970) and an elevation of the degree of aggregation of red cells (Laine and Zilliacus 1950, Redioch et al 1970). High blood viscosity always leads to a slow down of circulation and to reduced oxygenation of tissues.

"Wardle in 1967 suggested that it is the increased blood viscosity in the small digital arteries which is responsible for the common symptom of malignancy. Red cell aggregation, platelet aggregation and hypercoagulability can contribute to this syndrome. Crenated red cells, raised fibrinogen, increased platelet stickiness, are all a common feature of malignancy."

The full implication of high blood viscosity in cancer is described in Chapter 20 and in arthritis, MS etc, in Chapter 21.

On the subject of blood as a disease indicator, here is a quotation from the book *Hunza Land* by Dr Allen E. Bank from Nebraska, USA (1960):

"One of my major reasons for wanting to visit Hunza was to find out whether their robust health would be corroborated by evidence of superior circulatory function as revealed by a study of the arteries and veins within their eyes, also to learn if their eyesight was superior, in general to that of our population.

"Although optometrists do not practise medicine, their knowledge of pathology enables them to refer patients with abnormalities to proper medical authority. In my opinion, comparison of the diameters of the arteries and veins of the eye indicates whether the circulatory system is 'in balance' or 'out of balance'--whether a person's blood pressure is normal or abnormal. Determination of the color relationship between arteries and veins is also indicative of an individual's condition. For example, if the color ratio between an artery and corresponding vein is 1:1, a person is healthy (i.e. The artery is rich red and the vein has a color intensity of equal degree). If the color ratio is 1:2 (the vein is two shades darker than the artery), health is somewhat below normal. The average American--including many children falls into this category. A ratio of 1:3 indicates illness; at approaching death the ratio is 1:4.

"Interesting evidence of this theory is supplied by studies made by Dr Melvin Knisely of the University of Chicago. Dr Knisely made an exhaustive study of the color changes in the circulatory systems of dying frogs, monkeys and humans, and was able to predict the progression of diseases. As death approached, the toxin-laden corpuscles were unable to pass through the capillaries. Their progress was stopped and their oxygen content discharged. As a sticky substance in the blood covered the dying cells, they formed into clusters which the doctor called 'blood sludge'--a condition common in 50 diseases. Gradually, the blood flowed more slowly, and the tissues died of asphyxia. 'Understanding sludge', Dr Knisely says, 'will make possible a new attack on a whole panorama of human diseases'. Photomicrographs of the circulatory systems of frogs, monkeys and humans substantiated the theory. An account of this remarkable discovery appeared in *Life* magazine, May 31, 1948.

"The examinations I made in Hunza of the eyes of people in all age groups indicated that the Hunzakuts have healthy circulatory systems. Their artery-to-vein circumference ratios were, in most cases, perfect or near perfect, and the color ratios could generally be classified at 1:1.

"In all respects the Hunzakuts' eyes were notable. I found them unusually clear; there were few signs of astigmatism; even the oldest men had excellent far and near vision--an indication that their crystalline lenses had retained elasticity. Most of our crystalline lenses lose their elasticity in our early forties, and we require bifocal lenses for the remainder of our lives.

"Here, I believe, is confirmation of the fact that bodily health can be 'read' by a study of the eyes, and that general health promotes eye health. For our own benefit and that of our children, we should resolve that, starting now, we will make the necessary adjustments in our diet to promote the radiant health to which we are all entitled."

## **Blood Sedimentation Rate (ESR)\***

\*Red cells are called erythrocytes.

There are many components of blood chemistry which can be checked by complex tests.

A simple test of the blood sedimentation rate is one which indicates the degree of red cell aggregation. Again quoting from *Blood, the Paramount Humour*, by Dr Earle Hackett:

"The sedimentation test consists simply in watching a column of blood, which has been prevented from clotting, standing in a vertical tube. The red cells settle down to the bottom. The faster they settle, the sicker the patient (with a few exceptions, such as pregnancy).

"Absurd? No--more or less true.

"The explanation is that normal red cells are coin-shaped flakes of jelly and are slightly heavier than the plasma in which they are suspended. When blood stands still they will very gently settle to the lowest part of the container. They settle slowly because each individual one falls like a light disc on syrup, and there is a maximum resistance to its fall because of its large surface area.

"When red cells stick together they do so like piles of coins or dinner plates.

"These adhering collections offer less surface resistance when falling through plasma, and therefore in the test they settle more quickly. Rapid sedimentation accompanies all diseases which involve tissues or the entry of foreign or abnormal proteins into the blood. This will include a wide variety of chronic inflammations, toxic infections, operations, fractures, blockages of blood vessels, and disorders of the cell system which normally manufactures the plasma proteins."

## **Platelet Adhesiveness Index (PAT)**

Another factor which affects blood viscosity and by which the condition of the blood can be assessed is the stickiness of the blood platelets.

Dr Paul Owren, Hematologist at the Oslo University Hospital, devised a method of measuring platelet stickiness by means of observing the percentage of platelets which adhered to glass beads. The percentage is the index number.

Healthy young women have an average index number of 20, whereas cardiovascular-prone males have an index of between 50 and 70.

The effect of trauma on blood viscosity is reflected in the fact that after a major wound, all people, regardless of their starting PAI, have it increased to 90 for a period of 15 days.

Anti-coagulants have no effect on the PAI but reductions have been observed after the intake of Vitamin E, flaxseed oil, garlic, codliver oil, lecithin and aspirin. Alcohol, although it elevated triglycerides, had the effect of temporarily reducing platelet aggregation.

Dr Mark Patterson, hematologist at the National Heart Hospital, London, in a paper titled *Study of Action of Flaxseed Oil, Flax-phosphatides and Tocopherols on Platelet Adhesion* (July 1975) said that these substances, even when used in pastry., reduced the PAI by an average 20%. He said that deep vein thrombosis was absent after operations, and that protection was afforded to coronary heart patients. In an experimental group of 18, the PAI reduced from 59 to 29 and no deaths occurred compared to six deaths in the control group of eighteen.

Although aspirin lowered the PAI, it was an irritant and did not prevent deep vein thrombosis.

Recent research has revealed how dietary fats, in the amount consumed in the Western diet, cause platelet stickiness. Hormone-like substances called prostaglandins, derived from fatty acids in the blood, are used by the cells in the blood vessel walls to produce prostacyclin, and by the platelets to produce thromboxane. Prostacyclin controls the muscular contraction of the vessels and prevents platelets adhering to the vessel walls. Thromboxane determines the stickiness of the platelets and tends to cause the vessels to contract.

Prostaglandins differ in type depending on the type of fatty acids available. If fatty acids either from animal protein, dairy foods, eggs, or from vegetable sources such as nuts, are in abundance, then Prostaglandin H<sub>2</sub> (PGH<sub>2</sub>) is formed and the resultant thromboxane (TXA<sub>2</sub>) makes the platelets sticky. If blood fats are normal (which they never are on the Western diet) or if they are abundant from fish sources, then PGH<sub>3</sub> and TXA<sub>3</sub> are formed, and the platelets will be normal. (This is the effect of garlic etc.) The fatty acid in fish is called eicosapentaenoic acid or EPA.

Dr William Connor, professor of medicine, University of Oregon Clinical Nutrition Section, found that on a 10-day diet of salmon, patients' elevated cholesterol levels fell by 20% and triglycerides by 40-67%. These results are not entirely surprising because it has often been observed, but not before explained, that fishing communities in various parts of the world suffer a lower rate of heart attacks than elsewhere.

Because EPA has the effect of reducing platelet stickiness, lowering elevated cholesterol and triglycerides, and reducing blood viscosity, it is being researched for medical use\* and is now available in extract form. This is well and good, but it should be first of all realized that better results are obtainable simply by eliminating both animal fats and concentrated vegetable fats from the diet.

\*Medical authorities have stated low fat diets to be ineffectual in the treatment of disease, although they now recommend that fat should be limited to 30% of the diet. This recommendation is indeed ineffectual. The reduction of fat in the diet to 25% of total calories is helpful but achieves only a 10% reduction of elevated blood pressure, indicating the blood is still sticky. Total fat should be reduced below 10%. It has been proven that hypertension (high blood pressure) is directly related to high blood viscosity and that the removal of fat from the diet effectively reduces blood pressure in a few days whether there is salt in the diet or not. Drinking beer, and to a lesser extent other alcohol, increases blood fats and blood pressure. Three pints of light ale per day are sufficient to cause big increases in blood pressure over a three-day period, the increase in viscosity being sufficient to present risk of heart attacks in coronary prone patients. This information was reported recently by Dr John Potter and Dr Gareth Beevers at Birmingham Hospital, England.

It should also be noted that even on a high fat diet, athletes in training have low blood viscosity with no red cell or platelet stickiness, and consequently lower blood pressure, simply because in a physically fit body the metabolism of fat is more efficient.

That the effect of high EPA intake can be harmful and prevent blood coagulation altogether, is shown by the fact that primitive Eskimos whose diet consists mainly of fish, although not prone to heart attacks or cancer, are very prone to hemorrhaging, young and old alike, and often suffer nose bleeding lasting several days which sometimes reduces them to a state of collapse.

Improvement of circulation by the injection of snake venom serum has been demonstrated in Europe and the USA in the treatment of various complaints such as angina, claudication, arthritis and MS. The research shows that the marked relief of symptoms of these complaints is achieved by way of lowered blood viscosity. A recent television documentary on this topic showed graphically how a sample of treated blood flowed faster than untreated blood when both samples were released simultaneously in an inclined dish.

In Chapter 20 it is described how the incidence of both primary and secondary cancer is dramatically reduced among patients with circulatory problems who for long periods have been on anti-coagulant drugs to prevent blood clotting.

Thus it is abundantly clear that the state of health of an individual is directly related, not only to the nutrients contained in the bloodstream, but inversely to the harmful substances present and the degree of blood viscosity.

## **Other disease indicators**

It is axiomatic that lipotoxemia and high blood viscosity must eventuate in disease and premature death. The state of health always correlates inversely with the readings of blood pressure, pulse-rate, sedimentation rate, platelet adhesion index and blood viscosity. High readings of any of these related parameters is an indication of disease whether symptoms are evident or not.

## **Summary on blood viscosity**

This chapter can be summarized in the brief statements of three eminent medical researchers--

Dr Melvin H. Knisely, University of Chicago:

"Thus far, completely unagglutinated blood has been found only in strictly healthy animals and men. No severely ill person has yet been seen who did not have intravascular agglutination of the blood and visibly pathologic vessel walls."

Dr Leopold Dintefas, University of Sydney:

"Studies of athletes, normal individuals and patients with cardiac and renal diseases show a progression from a low blood viscosity with a high flow velocity among athletes to an elevated viscosity and low flow velocity amongst patients. Furthermore, my colleagues and I have found time and again an elevation of blood viscosity among apparently healthy individuals who later displayed obvious symptoms of heart disease and cancer."

Dr Meyer Friedman, San Francisco:

"A meal rich either in animal or vegetable fat can lead to sludging of the blood and blocked capillaries for most of a 24 hour period, and one fatty meal follows another. At this writing (1965), I know of no single phenomenon that has been so consistently neglected, in the study of heart disease, as this one. Later we may rue this inexcusable oversight."



## CHAPTER TWELVE

# THE VALUE OF MEDICAL EXAMINATIONS

*And that inverted bowl they call the sky,  
Whereunder crawling coop'd we live and die,  
Lift not your hands to it for help--for It  
As impotently moves as you or I.*  
Omar Khayyám

*Upon this Earth, confused and things amuck,  
Thy wine from thine own goblet thou must suck,  
Trusted men when misinformed may err  
It's a fact of life--you maketh thine own luck.*  
Author

A lot of intelligent middle-aged people have regular medical check-ups. Very often, because they display no glaring symptoms of imminent heart failure, they are advised that they are in sound condition, particularly if they have a resting ECG (electrocardiogram) which indicates no malfunction. Encouraged and complacent, they continue freely with their accustomed way of life and are bewildered when suddenly stricken by a heart attack or other disaster.

Here is an extract from a paper by the Longevity Research Institute:

### **Conventional physical health exams are poor predictors of coronary heart disease**

"The elevated lipid levels prevalent in those consuming the Western diet are accepted with relative complacency because it is so widely believed that our medical technology and diagnostic procedures make it possible to alert us to cardiovascular disease in its incipient stages, before serious damage results. But even the most thorough physical exams may fail to warn us in time.

"A study by Dr C. J. Pepine, Director of the Cardiac Catheterization Laboratory of the US Naval Hospital in Philadelphia, illustrates this.

"Pepine had observed that 30% of the Navy patients dying of natural causes were under 40 years old and had no history of coronary heart disease--yet CHD was the post-mortem finding.

"He recruited 41 Navy flyers or Marines on active duty, all under 40, all certified to be in excellent health by the best military diagnostic tests. His plan was to take these asymptomatic subjects and run angiographic studies on them every two years to monitor any developing coronary heart disease.

"He was shocked by the first baseline angiograms; 19 of the 41 supposedly healthy men had advanced coronary heart disease; 16 of the 19 had two or three coronary arteries with more than 50% closure of the lumen. One Marine with three coronary arteries almost entirely closed was running five miles a day as part of a fitness program.

"Two years later three of the group suffered myocardial infarcts (heart attack) and four who were re-catheterized were found to have worsened."

That servicemen in their thirties were found to have such advanced cardiovascular disease should not have come as a surprise. During the Korean War 300 autopsies were carried out on US soldiers killed in the fighting, their average age 22 years. The autopsies disclosed that 75% of them had advanced CHD. Some were found to have arteries almost totally blocked. Autopsies on 200 Japanese soldiers showed no CHD.

One person who received the surprise of his life is James Irwin, Apollo 15 astronaut. Astronauts are selected after the most rigorous tests. Not only must they have outstanding ability, they must also be perfect physical specimens. Can you imagine Colonel Irwin's utter surprise when he collapsed with a heart attack while playing handball? Speaking as guest of honor at the Annual Convention of the Pritikin Center in 1981, Colonel Irwin, now fully recovered and fighting fit, described the Air Force medical tests and the astronauts' diet with a mixture of light humor and deadly seriousness. Air Force pilots and airline pilots take note.

Notwithstanding medical check-ups every six months, airline pilots have on a number of occasions actually collapsed at the controls with heart attacks. But worse, I think, is the subtle incapacitation of a pilot when his brain becomes gradually deprived of oxygen. This can occur with an increase of blood viscosity due to stress of concentrated effort which slows down blood flow to the brain when arteries to the brain are constricted.

In this condition the pilot does not lose consciousness and appears to be operating normally, performing habitual procedures directed by his trained reflexes. However, thought processes slow down or cease, and reactions to information from instruments or radio transmissions slow down or cease. The condition may last for only a very brief time and the deterioration in performance may perhaps be only to the degree to arouse doubt in the mind of the co-pilot.

I am convinced that subtle incapacitation has been involved in some "unexplainable" aircraft incidents and crashes, the official causes of which were attributed to "poor operating techniques" or "departure from standard procedures".

On three different occasions I have witnessed this type of mental lapse. The pilots were contemporaries of mine and I knew them well. It is significant that as they got older they could no longer tolerate alcohol very well. One died and two retired early, but they had for all those years, twice a year, continued to pass their medical checks.

A survey of American insurance companies showed the life expectancy of US airline pilots retiring at 60, to be 18 months. About 80% reached retiring age still actively flying.

English and Australian figures are pretty much the same and other men do not fare much better. Looking at the medical records of all these men, who were medically examined twice a year over perhaps a period of 40 years, it would appear that the men were in good health all that time then to be suddenly stricken down. Many people actually believe some factor of retirement itself has suddenly caused the trouble. In actual fact the insidious process of cardiovascular disease which commenced in childhood and relentlessly continued, was never detected because the medical standards are too lax. They do not even require a stress ECG or blood tests.

Dr Kenneth Cooper of Dallas, Texas, reports a man of 58 who had a normal resting ECG (electrocardiogram) but who displayed evidence of severe coronary heart disease on a stress ECG. A subsequent angiogram disclosed his right coronary artery was 100% obstructed, the anterior descending

artery (the widow-maker) was 75% obstructed and the left coronary 95% obstructed. "Doesn't that make you feel good about your last resting ECG!" he said.

## ECG (EKG)

The most commonly used test of the heart function is the electrocardiogram. This test involves the placing of electrical detecting contacts, or electrodes, upon the skin of the chest in specific locations relative to the heart.

Minute electric currents associated with the muscular function of the heart occur throughout the cycle of each heartbeat and are recorded on a cathode ray oscilloscope for viewing and also in ink upon a continuous paper tape which records a whole series of heartbeats.

Usually an ECG is conducted at rest and this will in most cases show up a malfunction due to impaired blood supply to the heart or due to damage which has been sustained.

As the amount of blood required by the heart while the patient is resting is not great, a resting ECG does not reveal badly blocked heart arteries still capable of supplying this minimal flow. So a more effective method of employing an ECG is for the subject to be tested while exercising, either on a treadmill or a stationary bicycle. This test is called a stress ECG and is immensely more revealing than a resting ECG. To be fully effective the stress ECG must take the subject to full capacity. To take the subject to only 85% of their predicted maximal capacity would miss half of all defects. This procedure is described by Kenneth Cooper in *The Aerobic Way*, his latest book. Whereas a clear stress ECG is reassuring, it does not necessarily mean clear coronary arteries. Arteries 70% or more blocked are still capable of supplying sufficient blood flow to give a good result.

By the time a person starts to experience angina after meals or moderate exercise, the artery closure is around 90-95%. In fact, Nathan Pritikin's message to runners is this: "Heart disease does not manifest itself until at least one of the three coronary arteries is 90% closed, a condition not revealed by even the most carefully performed stress treadmill test."

An ECG is not capable of detecting all the electrical signals generated in the beating heart and is therefore limited. An abnormality at the rear of the heart will be sometimes missed. A vectorcardiogram is conducted with electrodes placed on the patient's back in addition to the electrodes on the side and front of the chest and is capable of detecting abnormalities with greater sensitivity than an ECG.

It is common for irregularities to be indicated on ECGs performed on athletes who are apparently in excellent condition. In the *Sports Medicine Book* (1978, Little, Brown & Co, Boston) Dr Gabe Mirkin says, "In the vast majority of cases, these irregular heartbeats are not harmful. An electrocardiogram often cannot differentiate between the healthy, thick muscular wall of the athlete's heart and the thin, stretched or damaged muscle of a person likely to have a heart attack. Twenty five percent of all runners over 40 years of age have 'irregular' ECGs".

I would proffer the comment on this opinion that the fact age 40 was specifically mentioned by Dr Mirkin is an indication not that the runners' hearts have become more muscular at that age but that atherosclerosis is beginning to restrict the heart's blood supply.

Worth mentioning is Dan Wales of Canberra, a long distance runner who at age 50 had a history of heart irregularities associated with his running. He was worried but kept up his running and adopted a very low fat diet. He wrote me later saying he no longer experienced heart irregularities.

An echocardiogram is another means of helping doctors evaluate the condition of the heart. It does not work from electrical impulses but uses the principles of sonar, whereby sound waves are emitted into the chest and the various echoes recorded. Analysis of these sound echoes gives information about the condition of the heart valves, the chambers, the muscle and the pericardium containing the heart and also

the lungs.

A phonocardiogram is a test where sounds emanating from the physical movement of the valves, ventricles and atrium, whether audible to the human ear or not, are picked up by a microphone stethoscope and recorded. Most of these sounds can be heard with an ordinary stethoscope, but the phonocardiogram can determine conditions with far greater accuracy. Opening and closing of heart valves have a distinct sound and when a valve is obstructed or damaged, the blood flow becomes turbulent and the resulting sound is called a "murmur".

## **Angiogram**

An angiogram is the only test which can positively visually identify blocking sections of arteries. This is done by means of introducing a harmless dye into the arterial blood, which shows up on an x-ray. The process is continued while a moving x-ray picture is taken of the dyed blood as it flows in the arteries. Narrowed and blocked sections of arteries can be detected in the heart and elsewhere in the body. Angiograms are not without risk and are used generally when surgery is contemplated.

## **Stethoscopes**

Simple tests which involve the use of a stethoscope by the medical examiner can be quite in error as the examiner gets older and his hearing begins to fail due to his own cardiovascular disease. Discrepancies between tests done in Honolulu for massed screenings for heart disease were noted when nurses' and doctors' results in detecting high pitched heart murmurs did not tally (3 to 1). It was found to be because the nurses' hearing was more sensitive than the doctors' who were older. Thus, no matter how carefully a test is made, the readings will be inaccurate if the examiner's hearing is not good. Transistorized electronic stethoscopes with volume controls can compensate for a certain degree of poor hearing. Electronic sphygmomanometers give blood pressure readings on a dial or LED display and are not reliant on the operator's hearing.

## **Blood pressure as an indicator of disease**

As already mentioned, a resting blood pressure of 120/80 is considered good, somewhat lower readings in a healthy person indicate superior cardiovascular function.

Regardless of a person's age, an increase in resting blood pressure (hypertension) means that something is wrong. Resting blood pressure will increase for a number of reasons.

1. Sticky, sludgy blood of high viscosity with aggregation of red cells and platelets.
2. Muscular contraction of blood vessels due to improper blood chemistry. Animal and vegetable fats (not fish fat) adversely influence the production of hormones which control vessel contraction and platelet stickiness.
3. Tension or stress which elevates the heart rate and at the same time tends to increase the blood viscosity.
4. Edema (fluid in the tissues) consequential to poor circulation and accentuated or perhaps even caused by a high salt intake.
5. Blood vessels narrowed by atherosclerosis either generally throughout the body or at a specific local point, eg. if the blood supply to the kidneys is impaired, blood pressure increases to ensure blood flow to the kidneys.

The increase in pressure is a natural and necessary response by the body to maintain adequate circulation, and instead of reducing it with drugs the underlying causes should be investigated and rectified.

Although blood pressure is usually elevated in the presence of advanced atherosclerosis, it may not be a

reliable indicator because of the other factors involved. It is not a simple matter of hydraulics (i.e. fluids and pipes), because blood is a complex, constantly varying liquid and so too are the blood vessels complex and variable. The body normally regulates the viscosity of the blood all the time, lowering it as it enters the smaller vessels, by which time the pressure also is much lower. The viscosity can also be lowered locally to maintain flow past a single constriction within a vessel.

Blood flow is very sensitive to viscosity--small changes in viscosity accounting for large changes in flow. Likewise blood flow is very sensitive to pressure--small changes in pressure accounting for large changes in flow. Thus, it is possible for serious artery closure to exist without an increase in blood pressure. Dr Melvin Knisely, in his paper *Intravascular Erythrocyte Aggregation (Blood Sludge)*, described how sludged blood can reduce the total blood flow to the kidneys by 50% without initiating a change in mean blood pressure.

What does this all mean? It means that although elevated blood pressure is almost universal in young and old due to high blood viscosity, the even higher readings that accompany age indicate more than just high viscosity, they signify grave danger to the vital organs. Doctors are becoming more aware of the significance of blood pressure, and the limits as to what constitutes abnormal have over the last few years been lowered several times.

So what good will come of this new awareness? Answer: none at all--only harm. What will happen now is that the drug companies will reap a bonanza as practically everybody in the country will now be defined as hypertensive. The good news is that the over-population problem will be eased, as on blood pressure drugs people become debilitated and impotent!

What is very important, but often ignored, is the necessity for blood pressure readings to be done accurately, in controlled, relaxed conditions. As already mentioned, errors are common, simply because of bad technique or poor hearing when using a stethoscope. Fatty tissue on the patients' arms can mask the sound of the pulse and cause errors up to 10 points. The patients should be completely relaxed and rested and not be digesting food, so that the blood demand is minimal. The blood pressure can then be validly compared directly with a figure considered to be optimum.

At the Pritikin Longevity Center in Santa Monica, blood pressure of hypertensives is reduced by four weeks of changed diet by an average of about 15%. This reduction is obviously due to corrected viscosity and improved oxygen transport because the arteries would not have improved much in that time. From this point, providing the strict diet is kept up, a further lowering in blood pressure would indicate improved arteries and/or collateral circulation.

Even on a high fat, high cholesterol, high animal protein diet, physical exercise of the "endurance" kind (called aerobic exercise) will in a comparatively short period of 2-3 months, greatly improve a person's blood pressure, even optimize it. This results from lower blood viscosity and improved circulation. Although greatly improved, the blood is only partially detoxified by exercise. To achieve regression of CHD adherence to correct diet is required.

Far greater care should be taken to obtain accurate blood pressure readings and even a slight elevation should be considered with concern.

## **Pulse rate**

Another indicator almost ignored in most medical checks is the pulse rate, and yet it is of great significance.

It should be checked with the subject completely relaxed, and as with blood pressure, not after eating, smoking or drinking alcohol. It should also be checked while exercising, and when the exercise is terminated the "recovery rate" should be checked (see heart recovery test in Chapter 17). These tests are included when stress ECGs are done, as a matter of routine.

Pulse rates vary. A fit athlete may have a resting pulse rate as low as 35 and at maximum effort as high as 200. Sitting or reading, it may be 50, and after a meal it may be 60. Drinking or smoking will bump it up more.

A "high risk" person may have a resting pulse rate of 80 or 90 but with maximum effort may only reach perhaps 140 or less. What is worse is when the pulse is irregular and misses beats here and there. Check it late in the evening after a big dinner when blood viscosity is the highest.

## **Drug control of blood pressure and cholesterol**

Whereas different drug therapies are capable of reducing measured levels of blood pressure and cholesterol, they are merely artificially modifying a symptom and frequently cause more harm than good.

Moderately high blood pressure is symptomless and in itself not harmful. Healthy arteries can withstand extremely high pressure without damage. It has been demonstrated in experiments with animals that when blood pressure was increased artificially to the extreme level of 4,000 mm the animals still behaved normally. At 6,000 mm pressure they died, still without artery rupture.

High blood pressure becomes dangerous when arteries are diseased and weakened. When they bulge locally in damaged areas the condition is called an aneurism and sometimes these may rupture under increased pressure.

It is medical practice to bring about the reduction of blood pressure with drugs, but these produce undesirable side effects and really achieve nothing more than modification of a symptom. Although in some cases the patient is saved from hemorrhage, early tests showed that overall death rates were increased by drug therapy. A five-year test on 8,300 male heart attack survivors aged 30-64 was conducted by the American Heart Association and the US National Institute of Health (Coronary Drug Project [*JAMA*, May 15, 1972]). It was a "double blind" test which means that neither the patients nor the doctors know who is getting the drug or who is getting the dummy placebo until after the results are recorded.

Estrogen, apart from reducing sexual potency and causing men's breasts to enlarge, in 18 months caused that group to suffer double the number of heart attacks and 50% more deaths than the placebo group who were receiving no drugs at all. Atromid S caused a high incidence of gallstones and produced no benefit. Four years ago, this drug was grossing \$70,000,000 a year for the manufacturers in the USA and Ralph Nader is trying to get the Food and Drug Administration to ban it.

Thyroid hormone, which reduces cholesterol by speeding up body metabolism, lessened cholesterol 12% but caused an 18% higher death rate. Patients with premature ventricular contractions had a 330% increased death rate.

High doses of niacin reduced cholesterol but caused bleeding in the eyes. While the placebo group had unchanged blood pressure and cholesterol levels, they had the highest survival rate. Anti-coagulants commonly used did not prevent blood clotting, they merely lengthened the clotting time and served no benefit.

However, later tests in the USA and Australia, using various recently developed drugs, showed that drug treatment of hypertensive patients achieved a significant overall reduction in mortality. The American trial, over five years, called the Hypertension Detection and Follow-up Program was reported in the *Journal of the American Medical Association (JAMA)*, December 7, 1979. The trial involved 10,940 people and results showed a 17% reduction in mortality from all causes. The Australian trial, over four years, called the Australian Therapeutic Trial in Mild Hypertension, was conducted by the National Heart Foundation and reported in the *Lancet*, June 14, 1980. This trial involved 3,427 people and results showed "a significant reduction in mortality in the actively treated group mainly due to a reduction by two thirds in deaths from cardiovascular disease".

The US trial result is possibly suspect because there was no control group used to make valid

comparisons. On the other hand, the more recent MRFIT (Multi Risk Factor Intervention Trial) showed that with patients suffering from moderate heart symptoms drugs caused a 66% increase in mortality. The MRFIT was a controlled study using 12,000 subjects. (Refer also to *The coronary primary prevention trial* in Chapter 9.)

In 1983, Drs Hamid Ikram, E. Espiner and M. G. Nicholls of Princess Margaret Hospital, Christchurch, New Zealand, reported the results of a study which showed that certain diuretic drugs used by 'heart patients robbed the body of potassium, resulting in heart irritability. Death rates among these patients were significantly higher than in patients using potassium-retaining drugs.

## Chelation

Chelation is an unorthodox form of treatment designed to remove calcium and other mineral deposits from the walls of arteries with the idea of dissolving arterial plaques blocking the vessels. A chemical solution is injected into the bloodstream, and not only are the arteries exposed to it but all body tissues as well.

Great claims have been made for this treatment, but tests on monkeys have shown that when the treatment was continued, in two months the monkeys' bones were greatly depleted of their calcium. Chelation therefore could possibly cause harm in some cases. The noticeable improvement in the circulation of coronary heart patients treated with chelation is due to a certain extent to reduced blood viscosity brought about by the drug Heparin used in the chelation solution.

It is claimed that chelation is effective and safe, and there are many testimonials to support this claim. Notwithstanding this fact, better short term and long-term results can be achieved by natural dietary means.

## General discussion

Bear this in mind--medical tests can only confirm what should already be pretty obvious. The metabolic diseases are the inevitable result of a process directly set in motion by the way people live and by what they eat. "Bad luck" does not cause them nor does "good luck" prevent them.

At the Cleveland Clinic in the USA they can predict with almost 100% accuracy a person's degree of cardiovascular disease given their cholesterol and triglyceride levels and their age. The age merely tells them how long the person's exposure to the conditions has been.

Maybe, when it comes to cardiovascular disease, all those other medical tests are superfluous. In 1971 while preparing the manuscript of *Beat Heart Disease*, Captain Carl Dransfield and I were at the office of the Air Pilots Federation in Sydney. There had been a meeting of senior pilots who were well known to us and as we discussed the manuscript, Carl and I casually observed them having a coffee break. On the spot we selected eight heart attack candidates from the group. By 1978 six of them had suffered heart trouble and two died of it. The two so far "unscathed" oddly enough are the ones I thought were the most certain. These pilots had been examined medically twice a year since their early twenties.

If you have always lived on the typical Western diet, then no matter how fit you may look or how well you may feel, then you will have some degree of artery closure just like the American soldiers in their twenties or the US Navy pilots and Marines in their thirties. The actual deaths usually start in the forties and fifties.

So when you read of someone dying "unexpectedly after a brief illness" what really happened is that they died after a "brief illness of a disease they had for years but did not know about."

For years I fondly ate too much fat and cholesterol, drank too much beer, comfortably secure believing that my five mile runs endowed me with immunity. My resting pulse rate was 42 and blood pressure a

perfect 110/70. I thought my arteries must be like new.

I wondered now and then about distance runners who did drop dead but put those rare cases down to extreme over-exertion. When autopsies showed that athletes can still get diseased arteries on the wrong diet, it was pointed out to me that the protection gained by exercise was mainly due to the arteries expanding and the greatly increased collateral circulation.

it is no good having a strictly conducted medical check-up which includes stress treadmill ECG etc. unless the results are evaluated against correct standards. Remember, you may achieve a good pass still with coronary arteries half blocked or worse, so warning signs no matter how slight, should not be ignored.

The story of my wife's heart problem was in Chapter 2. She has recovered from a dying condition only by changing her diet. She has not assiduously followed the diet and has not undertaken an exercise program. Her heart specialist was pleased with her condition however, because tests no longer show cardiac insufficiency, and irregularities and murmurs have vanished. So all her last examination achieved was that she became complacent and slipped back on her diet and back to occasional angina pain again. In other words the examination resulted in harm instead of good.

I hope I have made the situation regarding medical check-ups quite clear. As conducted by the average doctor and as conducted by doctors especially approved by the Department of Transport to examine airline pilots, the check-ups are woefully inadequate.

Quoting from *Type A Behavior and Your Heart* by Drs Meyer Friedman and Ray Rosenman (1974): "For anyone thirty years of age or older, a routine check-up might be very valuable for determining his blood pressure or the state of his lungs and stomach, and so on, but it is almost farcical as a means of detecting the presence of serious coronary artery disease".

People's blind faith in orthodox medicine is pathetic and public ignorance is appalling. This is not to be wondered at, because misleading and totally false information abounds, sometimes from most respected sources. Whereas some "old wives' tales" may have some substance of fact, there is much information being disseminated by "experts" which is utterly wrong and frequently merely an opinion based on wishful thinking.

Dr Christian Barnard, the surgeon hero of the heart transplant era, said jogging conveys no benefit to people and that joggers were like people who have themselves whipped for the sensation. Barnard's most successful transplant patient survived only 19 months, because his diet gave him a cholesterol level of 300 mg%--sufficient to ruin his new heart and so to die from a heart attack! Barnard had to retire from active surgery in his early fifties because of severe arthritis. In spite of such a pathetic knowledge of health his opinions are broadcast around the world.

Dr Barnard is no exception when it comes to rehabilitating heart surgery patients. It is common for coronary by-pass patients to be told they can lead a normal life and eat any food they like. Such advice is fearfully dangerous because, unless the diet is corrected, by-pass vessels acquire atherosclerosis rapidly and may block again in less than two years.

Knowing no better, doctors continue to use dangerous drugs to palliate disease symptoms which deludes both patient and doctor into false security, and induces further degeneration in the patient. For instance, even though it is clear from the published results of clinical tests that Atromid S conveys no benefit and increases morbidity, doctors still prescribe it. When in 1980 the Australian government planned to remove Atromid S from the list of subsidized drugs, so many protests were received from doctors all over the country, that the decision was reversed.

Then you have various fitness experts asserting in magazine articles that sexual intercourse (plenty of it) is adequate exercise. Assuming that everybody is capable of such sexual activity, it would be necessary to chase the lady a couple of miles beforehand in order to make the exercise significant from a physical fitness aspect!



When many "experts" disagree and spread confusion, the word "expert" loses any meaning. Proficiency is judged by results, not opinions.

Under the headline, *Young Bones Have the Creaks* in the *Manly Daily*, February 1, 1979, is the assertion by a senior orthopedic surgeon that "Children of sixteen are developing symptoms of osteoarthritis due to excessive competitive sport and long distance jogging!" Speaking at the National Safety Council Conference, he said many young children had poor muscular co-ordination and their bones were comparatively soft.

So now the tragedy will worsen, the children will continue to consume the appalling diet that is responsible for their condition, and discouraged from the one vital thing they were doing right--exercise--their old age will be upon them before they turn 21.

Many books on "natural health" contain much erroneous advice which detracts severely from the good advice they give. More harmful though are books such as *Dr Atkins Diet Revolution* and the *Scarsdale Medical Diet* which contain advice on losing weight by adopting a high protein, low carbohydrate diet. Such diets are conducive to heart disease and other metabolic diseases as will be explained.

The book *Executive Health* by Dr David Carrick (Bay Books, 1978) advises people to relax, enjoy good humor, and that "a little bit of what you fancy does you good". Dr Carrick was Medical Supervisor of the English *Financial Times*. The fact that the book carried the recommendation of the British Medical Association did not prevent Dr Carrick's death from a heart attack in 1980.

Then there are lectures and advice from personalities, like Professor Magnus Pyke, who are sponsored by manufacturers interested only in selling more of their expensive packaged processed foods. Professor Julius Sumner Miller in the past promoted on television the "beneficial" virtues of Cadbury's chocolate. World famous Dr Wilfred Shute of Canada claimed to have successfully treated thousands of cases of circulatory diseases with the therapeutic use of Vitamin E. Dr Shute produced proof in the form of photographs that Vitamin E can improve oxygen transport in a poor bloodstream and so assist healing. Notwithstanding, his brother Dr Evan Shute died of heart disease and Dr Wilfred Shute himself had developed serious heart disease. At the same time he continued to lecture that diet was unimportant in heart disease providing adequate Vitamin E was taken. In 1981, Dr Shute underwent open heart surgery for a coronary bypass, but died shortly afterwards.

Dr Richard Passwater, another well-known nutritionist, earnestly encouraged large intakes of supplementary vitamins and minerals which doubtless benefit some people in certain cases, but at the same time he continued to advise people to ignore the proven dangers of high dietary cholesterol.

Probably the worst error by a group of experts was made in February 1977 by the National Heart Foundation in Australia. The *Sun* newspaper ran a two-day feature on the Pritikin Longevity Center and the NHF was asked to comment. Their spokesman said that the information from the Longevity Center had been examined by a committee of experts who decided it was not worth following up. I wonder how many people are dead because of that decision.

The medical system of today is a vast industry orientated to the use of surgery and modern drugs which are "pushed" upon it by the drug companies. The spectacular success of penicillin and antibiotics years ago generated a misplaced confidence in drugs among doctors and the public alike which led to ever-increasing drug production and drug dependence. The term "medical science" has almost religious significance and giving names like Mandrak, etc. to drugs, succeeds further to enhance the scientific aura. Although drug companies have thrived, results healthwise have been dismal as displayed by drug-related complications and side effects among patients, and overall increased death rates.

This situation was made glaringly apparent in 1973 when doctors in Israel went on strike and reduced their total daily patient contacts from 65,000 to only 7000. The strike lasted a month and during that time the death rate, according to the Jerusalem Burial Society, dropped 50%. Again in 1976 in Bogota, Colombia, doctors for a period of 52 days refused to treat all except emergency cases and in that time the death rate dropped 35%. Also in 1976, the death rate in Los Angeles dropped 18% during a 12-week

slowdown by doctors. These, and other enlightening facts are described in the book *Confessions of a Medical Heretic* by Robert S. Mendelsohn MD, published by Contemporary Books Inc, Chicago.

Aside from improved surgical techniques in treating injuries and congenital defects, orthodox medicine as generally available is at the end of a blind tunnel. It is simply a defective product being sold at an exorbitant price.

### **In summary:**

1. Medical examinations generally are inadequate because many early symptoms are ignored or not looked for, or considered clinically insignificant or even regarded as normal.
2. When symptoms are diagnosed, they are usually viewed in isolation as a specific complaint when they are in fact a sign of general malfunction of body chemistry.
3. Whereas infection may be successfully treated by antibiotics, it should be remembered that infections rarely gain hold in a person who is healthy.
4. No matter the textbook knowledge of a physician and his prowess in diagnosis, medical tests are rather pointless considering that whatever the symptoms are, the body alone is capable of restoring itself to health once its handicaps are removed, and that medical interference only retards the natural healing process. The doctors should not be criticized too much however, because their training does not equip them for their task. The metabolic/degenerative diseases, to use the words of Dr Kasper Blond, world famed cancer specialist, "must be considered as an **insoluble medical problem** because it is essentially **a nutritional and social problem**. Such a problem cannot be solved by animal experiments, vaccines and drugs. Statisticians, pathologists, biochemists and doctors **cannot solve social problems**."
5. Just as mistakes and wrong advice exist in medicine, they also exist in the field of diet and nutrition. The most convincing books sometimes contain dangerous advice.

To become cynical as a result of reading a book about health would never do, and it is not for one moment suggested that our poor situation in health matters has eventuated because of other than good intent. Mankind progresses slowly, and painfully, because, even though you would scarcely believe it, man is sometimes capable of taking advantage of the successes and mistakes of those before him. If, in this modern world, you wish to succeed in the aspect of personal health, remember--

1. Facts and results count, opinions are only words.
2. Always endeavor to learn from the mistakes of others, because you have not time to make them all yourself.
3. You make your own luck.

For all those cheerful guzzlers who just don't care, we offer the following--a sort of tubby crew-members' nursery game to while away the time down the route. It goes like this:



## CHAPTER THIRTEEN

# HEART ATTACK AND STROKE

*"There I was I on my back, with nothing on the clock (airspeed indicator) but the maker's name."*  
Part of every pilot's repertoire, usable to describe practically any hazardous situation.

The term "heart attack" is ambiguous and can be used to describe any sudden impairment of heart function which may or may not result in permanent damage to the heart muscle. A heart attack may cause complete collapse and sudden death or perhaps only temporary discomfort. References are made to "little" attacks or "silent" attacks where small sections of the heart muscle are deprived of circulation and perish, gradually depleting it without the victim being aware.

The accepted medical definition is applied to a case when tests show that permanent damage (infarct) has occurred. There are two types of heart attack:

1. Where the heart muscle (or part of it) is deprived of blood supply perhaps stopping it completely or perhaps only impairing its action, causing collapse or perhaps just pain.
2. Where the heart's nervous center is affected, disrupting its rhythmic muscle co-ordination (fibrillation) and the victim collapses and dies unless defibrillation can be quickly employed.

No doubt both occur together sometimes. In any case the victim is "set up" by blocked arteries, and the kind of attack will depend on the factor or combination of factors that precipitate it.

Until recently, it has been thought that a blood clot blocking a coronary artery already partly blocked by atherosclerosis, was the cause of most attacks (coronary occlusion). However, in many cases at autopsy no clots have been found at all. Further, it has been noted that when clots are found, they occur more often in victims who have survived some time after the initial symptoms of the attack. It appears the clot could be a secondary effect in many cases, although perhaps the final "coup de grace".

Vigorous activity or exaggerated movements can cause a plaque to dislodge from an artery wall, resulting in a massive attack.

Coronary arteries almost blocked by atherosclerosis can still permit the heart to pump sufficient blood flow for moderate activity with the person quite unaware of impending disaster, although aware perhaps of having high blood pressure and perhaps other symptoms. The autopsy of President Lyndon B. Johnson revealed that of three main coronary arteries, two were totally blocked and a third was 60-80% occluded.

Increased blood supply for greater body activity can be met by the heart working harder and increasing the pressure. In order to increase its output to the rest of the body, the heart muscle itself must have more blood, and when deprived, pain may be felt in the chest and perhaps in the arms. This is called angina.

The demand may be increased in a number of ways. Exercise, concentration or digesting a meal are normal activities, and if limits are approached pain may be felt, but the activity is usually automatically

restricted and no harm results. Sometimes the pain is mistaken for indigestion. Should the oxygen-carrying capacity of the blood be reduced or enzyme activity impaired, eg by smoking or alcohol, the demand is greater too. Should the blood thicken as happens with a heavy meal, or with stress (perhaps accentuated by smoking, caffeine, high sugar intake or alcohol) it may not pass sufficiently through an occluded artery or perhaps block it altogether.

Furthermore, the condition of high blood viscosity tends to worsen as the flow slows. According to Dr Dintenas, "When an artery is progressively constricted, blood flow will remain nearly constant until a critical stenosis is reached. Up to the point, a localized increase in flow velocity (due to the constriction) will cause a decrease in viscosity. Once the flow slows down blood will increase viscosity and the problem compounds".

Many heart attacks occur during or after sleep following a fatty meal. After conducting a number of animal experiments, Dr D. G. Volheimer of Germany discovered the reason for this. As described in Chapter 10, the lymphatic system depends for its flow on a certain degree of movement in the tissues adjacent to the lymph vessels to squeeze the lymph fluid along. In Chapter 9 it is described how the absorption of fats after digestion (unlike other food substances) occurs by way of fat entering the lymph vessels to be emptied into the main bloodstream at a point just before the main veins return to the heart. Normal lymph will continue to flow even when the body is motionless in sleep but if fat particles continue to pour into the lymph while a person sleeps, the fluid will become thick with it and the vessels will clog up. Should now the person stir or arise, the clogged lymph vessels will suddenly discharge their load of concentrated fat into the main bloodstream which is already too thick and turbid.

The "peak hour" for heart attacks starts after midnight several hours after bedtime. This is easy to understand. Many people with already high blood fat levels, drink liquor before dinner, then perhaps wine with dinner, their heaviest, fattiest meal of the day, then follow up with coffee, cigarettes and perhaps more liquor. A few hours later their blood thickens like heavy paint and when pain occurs many think they have indigestion, at least at first.

It has been noted too that temperature extremes increase blood viscosity and that in cold winters and very hot summers there is an increase in the rate of heart attacks.

US Navy studies show the normal pilot heart rate to be higher on the approach and landing phase of a flight than in combat because of the greater stress of concentration required, particularly for deck landings on an aircraft carrier. In cases of airline pilot incapacitation or death through cardiac deficiency while on duty, the attack has almost invariably occurred on the approach and landing phase of the flight where the stress level is greatest. In some cases the incapacitation was temporary and involved a period of mental disorientation not quickly discernible by the co-pilot.

It has confused the researchers that heart disease rates are apparently not always consistent with the accepted factors. This, I believe, is because the incidence of heart disease has been assessed simply by the incidence of heart attacks.

Thus, it may appear that a certain ethnic group on a high fat diet but happy in a relaxed prosperous rural community do not suffer heart disease. This seems to be the case because they have a low incidence of heart attacks, say in the 40-60 age group, compared with elsewhere. In actual fact they doubtless are as badly diseased in the arteries as anybody else, but are fortunately without the stress situations which trigger heart attacks.

Thus, if instead of flying his aircraft, the pilot just referred to had visited the rural community or even stayed home, he would not have had his attack. If his medical check had been that week he doubtless would have passed clean as he had for the past 50 or 60 checks or more, his by now severe heart disease still undetected. Should the happy rural resident suddenly be placed in a situation similar to the pilot making an approach on instruments into a busy airport in bad weather, his arteries would not cope either and the atherosclerosis that had slowly accumulated for 40 or 50 years would be suddenly apparent.

Three ethnic groups whose diets appear to be highly conducive to cardiovascular disease and yet who

are renowned for their apparent immunity to it, are the inhabitants of the small town of Roseto, Pennsylvania, the Masai natives of Africa, and the primitive Eskimos. It has been noted however, that many Roseto people who went to live in the cities subsequently suffered heart attacks.

These cases are explainable and support the point I have been making. Roseto is a unique town inasmuch as it was founded by migrants from Roseto in Italy in 1882 and today the population there is still over 95% Italian. Thus--

1. The original lifestyle of an Italian rural village, simple and relatively free of stress remained virtually unchanged.
2. Although they consume a lot of fat and use more lard (animal fat) than olive oil for cooking, the traditional Italian food contained comparatively low levels of cholesterol.

These people have enjoyed the advantages of the type B behavior described in Chapter 8 because of their placid environment. It is significant that since these observations were made over 20 years ago, Roseto has gradually become "Americanized" and the rate of heart attacks there is now approaching the average American rate.

The Masai are a lean, proud, nomadic race. They are herdsmen and live almost entirely on a diet of milk, meat and blood taken from their cattle. They have been shown to display low blood cholesterol and an apparently low incidence of cardiovascular disease and heart attacks.

Autopsies have shown that the Masai do indeed develop cardiovascular disease, but they have an advantage compared to Western man which is explainable by--

1. Their cattle are scrawny and "range fed" and so, although high in cholesterol, the meat in their diet contains much less fat.
2. Consumed uncooked, the food contains natural enzymes which, as described in Chapter 10, bring about more thorough digestion of fat and lower cholesterol levels in the blood.
3. The Masai walk about 25 miles a day with their herds and the exercise expands their arteries and collateral circulation, as well as lowering blood fats and blood viscosity.
4. Their diet contains no sugar or other refined carbohydrates.
5. They spend more time in the sun.
6. Their lifestyle is relatively stress free.:

The primitive Eskimos are similarly protected, and although they consume more fat than the Masai, the fat is eaten raw., in addition to which their circulation is assisted (as also described in Chapter 10) by the EPA contained in the fish they eat.

It should be noted that, like the Eskimos, the Masai and the Roseto Italians are not renowned because of their longevity, but merely because they do not display cardiovascular degeneration as early in life as we do.

The greatest confusion perhaps has been caused by the misconception regarding the effect of polyunsaturated fat which when substituted for animal fat in the diet, results in lowered blood cholesterol, an apparently beneficial effect. Unfortunately, it causes aggregation of red blood cells easily capable of causing a heart attack, and is therefore extremely dangerous.

If a section of the heart muscle is deprived of blood supply for even a few minutes that section will perish and in time, scar tissue will form. This damage shows on an electrocardiogram, and is called an infarction.

When similar damage occurs to the brain, it is called a stroke. A clot which lodges in the pulmonary artery between the heart and the lungs can cause sudden death and be mistaken for a heart attack. This is called pulmonary embolism.

Disruption of the nervous control system by atherosclerosis in a critical area of the heart can trigger arrhythmias such as fibrillation or cardiac arrest and these cases are frequently without warning, sudden

and fatal. Shock can also disrupt nervous control, causing similar attacks.

When part of the heart is receiving adequate blood supply and another part is deprived, the deprived part will turn a bluish color because of oxygen lack. When this happens the heart may go into fibrillation, fluttering uselessly instead of pumping. In tests with dogs, the application of a clamp to one coronary artery instantly caused fibrillation which stopped when the clamp was released.

Thumping the chest over the heart sometimes restores heart action. Coronary care units, besides having staff trained in such physical resuscitation, have special defibrillating machines to restore heart rhythm. They call them "crash carts". Cardio-pulmonary resuscitation (CPR) is a procedure conducted preferably by two people whereby the heart of the patient is rhythmically compressed to maintain circulation and the lungs are ventilated by mouth-to-mouth pressure until normal function returns.

Severe stress, such as shock, over-exertion and/or overheating can cause ventricular arrhythmia even to people unaffected by atherosclerosis, apparently by raising the level of hormones in the heart to an excessive degree. Experiments with animals indicate that a physically fit person is protected against such excessive hormone levels. However, rare cases of sudden death have even occurred to highly trained athletes.

Autopsies on a number of athletes have revealed diseased coronary arteries proving that endurance training alone is not full protection against cardiovascular disease.

A recent survey of all the fibrillation deaths in Rhode Island over a five-year period showed that seven out of eight occurred to people jogging. These avoidable deaths occur because people start exercise programs unaware of the atrocious condition of their arteries and the fatty state of their blood.

## **Congestive heart failure**

This only occurs to a person with severe coronary artery disease which so limits the blood supply to the muscle of the heart's left ventricle (the main pump) that it cannot contract vigorously enough to pump properly. However, the right ventricle (small pump) continues to push normal quantities of blood through the lung circuit and on to the main pump, but the left ventricle is weak and cannot cope with all the blood from the lungs and so the blood begins to accumulate in the vessels of the lungs. As the process continues, fluid from the blood seeps out from the vessels and floods the air spaces of the lungs. Shortness of breath occurs.

This condition of the lungs is called pulmonary edema. This impedance to circulation may cause fluid from the blood to leak from veins into the surrounding tissues, causing edema in various parts of the body. This is noticeable when legs and ankles swell.

## **Assistance to circulation**

Apart from administering oxygen to heart attack patients, direct assistance to the circulation can be given by EPCA, External Pressure Circulatory Assist, developed by Dr Harry Soroff of the Tufts New England Medical Center in Boston. It consists of an inflatable nylon bladder which is wrapped around the patient's legs. The bladder contains water and contracts hydraulically, synchronized to the heartbeat by electrocardiograph. It assists circulation by helping to fill the heart with blood between contractions. It reduced mortality in coronary care from 15% to 7%.

Dr Wilfred Shute whose book, *Vitamin E for Ailing and Healthy Hearts* makes dramatic claims for the use of Vitamin E in benefiting stricken patients, described a simple therapy used by Dr Samuel Levine of Boston:

"As early as 1952 Dr Levine was able to lower the death rates of acute Coronary thrombosis cases from approximately 40-60% to 9.9%, merely by taking the patient out of bed as soon as his pain had subsided,

and putting him in a comfortable chair with arms and a seat which supported the buttocks and thighs evenly."

Dr Shute laments that this discovery has been ignored ever since except by himself and adds that "There has been a similar lag between knowledge Of the effectiveness of alpha tocopherol (Vitamin E) and its use".

Newly tested drugs such as Streptokinase (an enzyme), Urokinase (an enzyme) and Tissue Plasminogen Activator (TPA) injected into the bloodstream can quickly dissolve clots and restore circulation to victims of heart attack and strokes.

Plasmapheresis, a new technique for removing cholesterol from arterial plaques, is presently being tested by the Pritikin Research Foundation in collaboration with physicians at a major US medical school. The process, similar to dialysis, removes low density cholesterol from the blood, and daily treatments are expected to substantially clear arteries in about 30 days.

These procedures constitute "crisis medicine" and although life-saving, they are not the solution to the problem of heart disease. The real solution follows in the next chapter.

The most important thing of all for the patient's recovery once they have survived the initial attack is to ensure that when well enough to take food, they strictly avoid all food containing fat and cholesterol, preferably adopting a diet along the lines of the Gerson or Pritikin regression diets. On this diet no supplementary vitamins or minerals are used, and in a few days oxygen transport is greatly improved simply because of a cleaner bloodstream.

## **Stroke**

A stroke is another manifestation of cardiovascular disease or more specifically, atherosclerosis of arteries supplying the brain.

Should part of the brain be deprived of blood supply, the victim may collapse and if the condition lasts for more than a few minutes, that part of the brain will be destroyed. The victim has had a stroke, and according to the nature and degree of the damage, so will depend the subsequent incapacitation which will be permanent.

When an impaired artery ruptures in the brain due to high blood pressure it may be called a cerebral hemorrhage, but is still classified as a stroke. This kind of stroke was once the most common, but the 3 to 1 ratio has reversed since oral drugs have been used to control hypertension. The patients now have lower blood pressure but a higher degree of atherosclerosis-induced strokes.

A stroke caused by a partial blockage may not result in the destruction of brain tissue if there still remains enough blood flow to keep cells alive. In such a case improvement of the flow can restore brain function. If severe enough, both kinds of stroke can be instantly fatal.

Arteries will rupture only if their walls are damaged by an aneurysm, ie. They first bulge out at a point corroded by the disease. Tests of dogs showed their healthy arteries could withstand enormous pressures. The dogs behaved normally with a blood pressure of 4000 mm! At 5800 mm their eyes bulged out, and at 6000 mm they died. Nevertheless none of their arteries ruptured.

A Canadian study team headed by Dr H. Barnett of the University of Western Ontario reported after a seven-year study that aspirin taken four times a day reduced the incidence of stroke by 48%. It has previously been reported that aspirin tends to reduce blood clotting in surgery. Other reports suggest that aspirin may avert heart attacks. Dr Barnett says it interferes with the action of blood platelets whose normal purpose is to form clots, which of course is a vital natural protection against loss of blood. At the same time, aspirin is an irritant to the digestive tract and it does further harm by inhibiting the action of the white cells of the immune system on its way to kicking the kidneys around a bit. Great stuff, aspirin.





## CHAPTER FOURTEEN

# THE BREAKTHROUGH AND THE SOLUTION TO HEART DISEASE

*"Everything is simple, when you know how."*

Regardless of age, it is possible to reverse disease factors even if deterioration is very advanced.

The corrective measures and the preventive measures are the same. It is simple, all you have to do is this:

1. Clear the bloodstream and reduce its viscosity. The blood will then carry more oxygen and flow more freely. This is vital. This is achieved by strict diet in a few days.
2. On a longer term basis the body's metabolism must be improved. This is achieved by diet and exercise.
3. With body chemistry rectified, the fat and cholesterol clogging the arteries and tissues will gradually be eliminated.

There have been two breakthroughs in recent years in understanding the causes of the problem. They both disclose we have deviated too far from nature and are paying the penalty.

The first breakthrough was so spectacular in its benefits that many people, including myself, accepted it alone as being the absolute solution. This was the aerobic exercise system which when applied to a sedentary person, achieved such enormous physical and mental improvements and increase in life expectancy that it was easy to accept as a panacea.

Many wonderful recoveries of people with severe heart conditions and other degenerative conditions were described by Dr Kenneth Cooper in his book *Aerobics* in 1968. Since then such recoveries are considered commonplace and it is no longer news that many heart attack victims regain such physical excellence that they participate in marathon running races.

Aerobic exercise (within safe limits) can achieve an enormous improvement in general metabolism (particularly the metabolism of blood fats), even without changing the diet. Even light exercise provides benefit simply by assisting circulation of lymph and venous blood. The cardiovascular system tends less to atherosclerosis (CVD), the bloodstream is cleaner, and extra "back-up" circulation systems (collateral circulation) develop.

As a result, the entire body--nervous system, digestion, elimination, glands and vital organs--attain best performance, enabling even severely degenerated people to regain good health. People whose lifestyle incorporates sustained vigorous exercise almost invariably continue a healthy active life way beyond 70,

regardless of diet.

You'd settle for that?

That's what I did until I discovered the second and even more spectacular breakthrough, the one by Nathan Pritikin.

Pritikin discovered nothing new. In fact the principles he utilized have been used by natural health practitioners for many years. What Pritikin did was to unearth, study, evaluate and collate masses of records of observations and experiments conducted by countless researchers in the past. Separately these were clues in a gigantic puzzle and their full significance became apparent when he got them fitted together. His breakthrough lay in doing this scientifically and so convincingly that, having gained public acceptance and government backing, the barriers of medical prejudice are lowering at last. This was the real start of the "Health Revolution".

Pritikin's crusade started with a battle against heart disease. The clues he had were many but often conflicting and confused.

One clue was that during World War I, deaths from degenerative diseases in food-rationed countries decreased. The decrease in death rates from these diseases was of greatest significance in meat- and dairy-producing countries where land use was changed to produce grain instead, and in Germany where fats were extracted from food sources and anywhere at all for making war materials.

Between the wars, people like Sir Robert McCarrison lectured around the world about the health of the Hunza people. It was apparent that food was the key factor and the sort of food was known, but without "scientific proof" and without support and publicity, such early crusades gained little ground.

The same clues from World War I Europe were repeated again in World War II, this time with more evidence. In 1956 at the International Congress on Arteriosclerosis, the question arose--was atherosclerosis in humans reversible? A German pathologist who had been assigned to study post-mortem conditions of concentration camp victims made a statement in reply to this effect: in people who had died after several years of imprisonment, even elderly people, there was an astonishing disappearance, through absorption, of atherosclerotic fatty deposits from the arteries of the heart and brain. These effects were attributed to the complete absence of fat in the meager scraps which had been their diet. They had exhausted all fat deposits in their bodies.

A review of 24,546 autopsies performed in Austria showed there were seven times as many heart attacks in 1958 as there were in 1944 when the wartime stress was greatest.\*

\*The statistics referred to are for heart attacks and are not representative of the actual incidence of heart disease itself. Because it was assumed the wartime diet, in reducing heart attacks, had at the same time reduced the underlying heart disease, cereal-based diets have become popular. However, in the longer term cereals are far from an ideal food, for reasons explained in Chapter 15.

Observations of primitive tribesmen and laboratory experiments with animals were additionally studied by Pritikin, providing him with the knowledge which enabled him to undertake, for him, the most important experiment possible.

His aim was to save his own life threatened with severe coronary disease. That experiment was described in Chapter 3. It worked, and provided the basis for the Pritikin Longevity Diet, which since 1976 has saved the lives of thousands of sick people.

## **Pritikin Longevity Diet--basic composition**

The main benefits from this diet for people, sick or well, come from the severe restriction of fat to less than one quarter of the amount contained in the average ordinary diet, although important benefits are gained by the elimination of refined carbohydrate and the reduction of protein. The total fat means any

kind of fat--saturated, unsaturated or polyunsaturated, in any form at all, except that which occurs naturally in unrefined vegetable foods, and includes all oils whether visible or hidden in prepared food.

The protein excludes meats, fish, poultry, eggs and dairy products in order to minimize cholesterol as well as fat intake.

Strictly followed, this program works.

I thought it astounding that a man could be trained to be able to run a 26-mile marathon one year after a heart attack. I have met such people in Honolulu, patients of Dr Scaff.

But that was nothing compared with the fantastic results from the corrected diet.\* It works so effectively that people literally dying of heart failure respond within three days, get up and rapidly improve.

\*Any diet drastically reduced in fat content, such as the Gerson diet described in Chapter 14, achieves the same result. So too does fasting, which in some cases is very beneficial.

## How it works

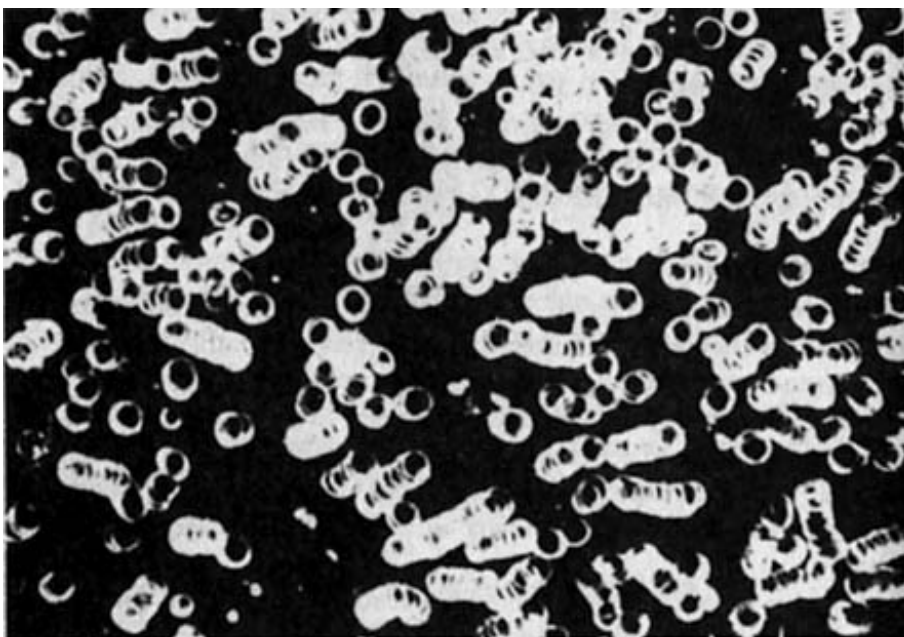
When people are gravely ill in hospital with coronary insufficiency or heart attack they are administered pure oxygen to breathe, sometimes in an oxygen tent, or an oxygen-pressurized capsule. The extra oxygen filling the lungs can mean the difference between life and death but it still requires the red blood cells and the "oxygen transport" system to deliver it.

The "regression" diet is so utterly simple in the way it works and so infinitely more effective than any other treatment, that it resembles magic.

There is a book recently published called *The Body is the Hero* by Dr Ronald Glasser. It illustrates that recovery from disease is achieved by the wonderfully intricate defense systems of the body itself. As clever physicians know, providing a patient is given a little rest and some medicine to placate anxiety, the body will rectify most ailments by calling on its own defenses. Now if you give the body, for the first time, a really unhandicapped chance to show what it can do, then you see what looks like magic.

First have a look at the photograph taken through a microscope of the red corpuscles in the blood (Fig. 14.1). It shows what happens to the red corpuscles after a high-fat meal. Stuck together like that they cannot carry much oxygen. With the blood thick and sticky as well, what chance do you have with arteries that are clogged, and blocked with atherosclerosis? Not much.

Fig 14.1 Red corpuscles after a high-fat meal



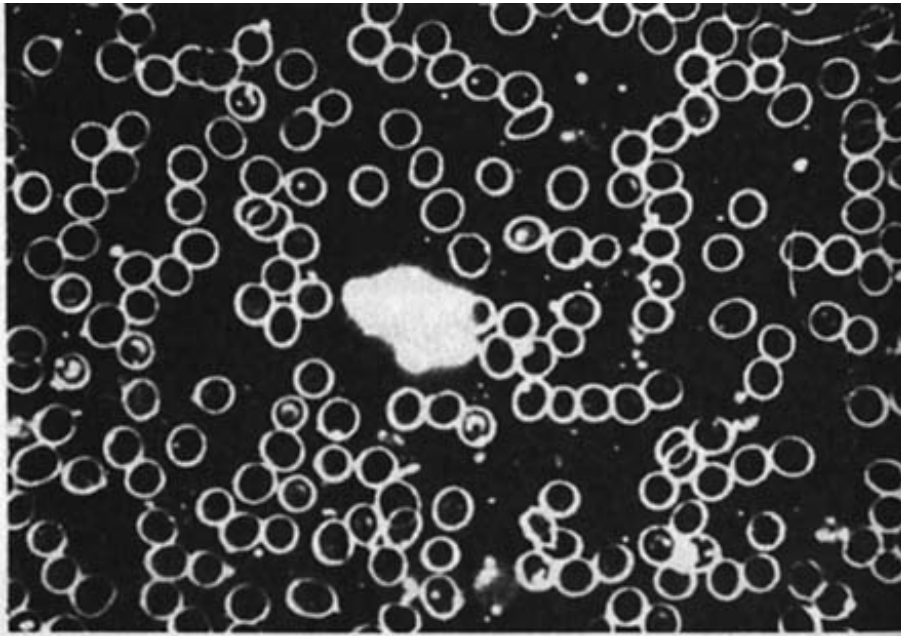
Example of red blood cell aggregation and rouleaux formation 6 hours after

a high-fat meal.

The photo was taken six hours after the meal. Some people's blood is like that all the time! And smoking, coffee, alcohol, or stress make it worse. Can you visualize the patient right now, frightened and pale-bluish, pulse erratic etc.?

So straight away onto the "regression" diet. Within a few hours the patient feels better. In a couple of days, feels good and wants to walk about. What has happened? Have a look at Figure 14.2.

Fig 14.2 Red corpuscles after a low-fat meal



Dark field high power view of normal non-aggregation red blood cells six hours after a lowfat meal.

You can see clearly what has happened. The oxygen transport system is working again!

If the patient has had congestive heart failure, this clears in three or four days, because with improved circulation, fluid no longer builds up in the lungs. This explains why people who have suffered badly and have eaten nothing for a few days, suddenly recover. They feel so good sometimes that they "could eat an ox".

Sometimes they try, and die the same night. Most hospitals serve catastrophic food.

The "regression" diet must be adhered to rigidly at home or anywhere else. It is stricter than the regular (maintenance) diet in that it permits no cholesterol-containing foods at all, as well as drastically reducing all fats and eliminating sugar, so as to allow the body to gradually rid itself of the fat and cholesterol which were strangling it.

The patient feels like more activity and this is exactly what is required. Get out and walk. Don't rush it, take it easy but walk, and together with the diet and exercise, which of course should be supervised in precarious cases, the arteries gradually clear.

When cholesterol is reduced below 150 (3.85), it is estimated the arteries may completely clear in two years. Dr Wissler of the University of Chicago Medical School showed that artery disease in monkeys reversed much faster when they were given oxygen. Dr Finney of Baylor University in Dallas showed that infusing oxygen directly into the bloodstream of monkeys reversed and "melted" plaques in eight weeks. This study was over 10 years ago, but further research along these lines is being undertaken. Other animal experiments in 1978 by Dr M. R. Malinow of the Oregon Regional Primate Center showed that diet enriched with alfalfa not only reduced the assimilation of dietary cholesterol by the body but assisted in the process of artery plaque reversal. The active substances in the alfalfa are chemicals called saponins which are contained also in other green vegetables.

Summarizing, the Pritikin Program works because it vastly improves the body chemistry to a condition which most people have never experienced.

1. The bloodstream clears in three or four days. Blood viscosity reduces, red cells separate and pass through previously blocked arteries and smaller vessels to convey oxygen in generous quantities to deprived areas. This initial effect is dramatic and the patient quickly responds. The effect is measurable and is indicated by marked improvement of blood pressure, cholesterol, triglycerides, and glucose levels.
2. Exercise, over a longer period of some weeks, improves the body's metabolism, particularly the metabolism of fat, and develops collateral circulation. This secondary effect further markedly improves the patient's condition and together with the diet, achieves optimum body weight.
3. With the elimination of excess cholesterol and triglyceride levels, the body commences to dispose of the atherosclerotic deposits which have been strangling its circulation. With strict adherence to the program it is thought possible to clear arteries of atherosclerosis in two years.
4. All other degenerative diseases are also quickly alleviated, particularly if stress and emotional problems are eliminated.

## CHAPTER FIFTEEN

# DIET AND NUTRITION

*Unless the doctors of today become the dieticians of tomorrow,  
the dieticians of today will become the doctors of tomorrow.*  
Alexis Carrel, Nobel Prize Winner--*Man the Unknown* (1935)

So versatile is the human digestive system that people can live in apparent good health on many different kinds of diets derived from a wide variety of sources throughout the entire world. The diets may vary from being almost totally carnivorous to being totally vegetarian with or without dairy products.

It is obvious that all these diets must contain the minimum required amounts of the basic components--protein, carbohydrate and fats as well as the necessary vitamins and minerals--but getting these is not our main problem.

Notwithstanding that different diets appear to maintain good health, some do so at considerable strain on vital organs which eventually become diseased, and when vital organs fail as eventually must happen, the person dies, unless sustained by some artificial method.

There are some commonly held and very dangerous misconceptions about what constitutes a "balanced diet" which have set many nutrition-conscious people on the wrong track, causing them a great deal of harm.

We must adopt a diet that does not overstrain the digestive system or produce toxic substances which damage nerves, arteries, joints and vital organs. The excessive intake of grain products as encouraged by the Pritikin diet and the Macrobiotic diet is an example of bad effects accompanying good. Some weight-losing diets, such as the Dr Atkins diet and the Scarsdale diet, while achieving weight loss in fact are damaging in the long term.

It must be made clear at the outset--the dietary problem of the modern world stems very little from deficiencies of nutrients in the food, they are caused by three distinct faults:

1. The cooking of food.
2. Excess of dangerous substances in the food.
3. Excess of total food consumed regardless of its quality.

As described in the chapter on degeneration, Dr de Lacey Evans' observations of 2,000 centenarians showed that for the attainment of long life the amount of food was more critical than the type of food consumed. Be that as it may, I shall repeat a paragraph from Dr Jeremiah Stamler's George Lyman Duff Memorial Lecture 1977:--"An additional comparison has just become available, with data on mortality, for three groups of Californian Seventh Day Adventists (non-vegetarian, lacto-ovo-vegetarian and pure

vegetarian) compared with the Californian general population. Seventh Day Adventists have lower mean serum cholesterol levels than Americans generally. For 47,000 Adventist men aged 35 and over, age-sex - standardized, mortality rates were 34% lower for the non-vegetarians, 57% lower for the lacto-ovo-vegetarians, and 77% lower for the pure vegetarians, compared to the general population."

Upon examination it is easy to see why a pure vegetarian diet conveys health and long life.

To remove some common misconceptions, I intend to explain, among other things::

1. The average person consumes protein and fat in harmful quantities.
2. That animal protein (including dairy products), especially when cooked, is not a desirable source of body protein, and is a poor source of energy.
3. That animal fat or concentrated vegetable fat, especially when heated, is not a desirable source of body fat.
4. That refined sugar or sugar extracts are undesirable as a source of blood sugar, whether for quick energy or not.
5. That salt added to food is harmful and totally unnecessary.
6. That cooking is harmful to food, not only depleting its nourishment, but at the same time causing pathological changes.

Let us now look at the different components of food and how they are utilized in the body.

## **Protein**

The body, which is made of many different kinds of protein, manufactures the new protein it requires from a variety of about 20 amino acids in countless complex combinations. There are eight amino acids from which the body can manufacture all the others. These eight are called the essential amino acids and must be present in our food.

Foods such as meat, eggs, milk and cheese are animal protein foods and because they consist largely of protein, are commonly considered to be very important. However, it is now well known that all natural vegetable foods contain protein in small but adequate amounts.

it is a popular misconception that animal protein foods are essential to good health and many dieticians emphasize this continually. This misconception, plus the palatability of these foods when cooked, results in enormous excesses of protein in the diet, with very harmful results. Protein as eaten, first must be broken down chemically into the separate amino acids before being reassembled as new protein. Protein cannot be stored. The body can only use what it needs, and the excess must be converted into carbohydrate and fats for energy requirements or stored as fat. This process results in toxic by-products which must be eliminated from the body. If these levels are high the body cannot cope, and toxins such as uric acid and ammonia remain in the bloodstream causing inflammation in sensitive areas and increasing the risk of arthritis, kidney and liver damage, artery calcification, cancer and other metabolic upsets. Animal protein foods contain high levels of cholesterol and fat as well.

Pure vegetarians who do not use even dairy products get adequate supplies of amino acids from cereals, fruit and vegetables eaten in reasonable proportions. A diet of pure fruit alone provides adequate protein and fat.

"One of the biggest fallacies ever perpetrated," said Dr Alfred Harper, Chairman of Nutritional Sciences at the University of Wisconsin, Madison, and of the Food and Nutrition Board of the National Research Council, "is that there is any need for so-called complete protein. Some proteins provide more limited amounts of some amino acids than others. But it has been recognized from the start of this century that if you increase the quantity, you don't have to worry about the quality. We have shown that adults can remain in protein balance on a diet of wheat, even flour".

It has also been a popular misconception for years that athletes and manual laborers need large amounts



of protein foods. Tests on laboratory animals and with human athletes show this to be an utter fallacy. A group of athletes were tested for physical endurance after periods on different diets. On the high protein/fat diet their physical work endurance was 60 minutes, on a mixed diet 120 minutes, and on the high complex carbohydrate diet, 180 minutes.

Compared to carbohydrate, the digestion of protein requires seven times the amount of water, for the urination necessary to flush out ammonia produced in the body. Dr Nathan Smith, Professor of Sports Medicine at the University of Washington, Seattle, said:

"To be excreted in urine, nitrogen byproducts require water, and this can lead to dehydration. Every year a significant number of deaths occur, especially in high school football practice, where athletes are trying to build themselves up on protein. They lose water, this prevents them from dissipating body heat, and they get heat stroke."

Cow's milk, which contains twice the amount of protein as human milk, can cause hypernatremic dehydration in bottle-fed babies because large amounts of water are needed to flush from the body the waste products which result from protein consumption. This type of dehydration is very dangerous and can lead to brain damage, shut-down of the kidneys and death within hours.

Together with inactivity, high protein intake causes osteoporosis--weak and porous bones. When protein intake exceeds about 95 grams per day, the body goes into negative mineral balance because of high acidity. With an intake of 140 gm, there is a mean loss of 60 mg of calcium per day, regardless of the amount of calcium ingested. In the UK, tests have shown that vegetarians aged 70 have bones equal to or of greater density than the bones of meat-eaters aged 50. Calcium compounds, not excreted from the body, build up in various locations and can cause calcification of the aorta (main artery). Calcium supplements can cause this as well. This form of hardening of the arteries can occur in the absence of cholesterol (ie. on a vegetarian diet too high in protein).

Studies of primitive Eskimos in the late 1800s and early 1900s revealed no evident cancer or heart disease among them. These robust and happy people, living in their natural state, existed almost entirely on animal protein and fat, and so impressed were some of the observers, they adopted all-meat diets themselves.

What these people overlooked was that the Eskimos' vigorous health was enjoyed only by the young, and that by middle age, when their vital organs began to break down, the Eskimo aged rapidly, and suffered severe osteoporosis. At the same time, the Eskimos had a very low resistance to infectious diseases whenever exposed to them. Dr Samuel Hutton, one of the observers (1902-1913) in his book *Health Conditions and Disease Incidence Among the Eskimos of Labrador*, confirmed the fact that cancer and other diseases of civilization were not evident among the Eskimos but had this to say about their life expectancy:

"Old age sets in at fifty and its signs are strongly marked at sixty. In the years beyond sixty, the Eskimo is aged and feeble. Comparatively few live beyond sixty and only a very few reach seventy. Those who live to such an age have spent a life of great activity, feeding on Eskimo foods and engaging in characteristically Eskimo pursuits . . . Careful records have been left by the missionaries for more than a hundred years.

"Perhaps the most striking of the peculiarities of the Eskimo constitution is the tendency to hemorrhage.\* Young and old alike are subject to nose bleeding and these sometimes continue for as much as three days and reduce the patient to a condition of collapse."

\*The reason for this hemorrhaging is the large quantities of EPA in the fats of the Eskimo diet, as described in Chapter 10. EPA, and the improved circulation it affords, accounts also, to a great extent, for the Eskimos' freedom from cancer and heart attack.

Vilhjalmur Stephansson spent many years among the primitive Eskimos around the turn of the century, observing them specifically for signs of cancer. He wrote the book *Cancer, a Disease of Civilization* and erroneously concluded that an all-animal diet was the key to their health. Later under the auspices of the

US meat industry, Stephansson adopted an all-meat diet. His blood cholesterol rose to over 600 mg% and he developed serious cardiovascular disease.\*

\*The Eskimos consumed most of their food (including large amounts of fat) uncooked, and thereby to a great degree were protected from hypercholesterolemia as explained in the discussion on raw food.

Dr W. H. Hay, Director of the East Aurora Sanitorium, writing on cardiac-vascular-renal disease (degeneration of the heart, arteries and kidneys) said: "In close observation of many hundreds of cases of blood pressure, hardening arteries, degenerating kidneys, dilating hearts, in a private sanitorium practice of the past 30 years, I have not seen one single exception to the rule that an excess of protein is behind every case, the average being well over ten times as much protein as Chittenden says is necessary to repair body waste".

Hypothyroidism, a condition associated with artery degeneration, diabetes, cancer and numerous metabolic upsets, often results from a diet high in protein even in areas where iodine is plentiful in food supplies. In his book *Hypothyroidism, The Unsuspected Illness* (1976), Dr Broda Barnes cites medical research since 1933 to show that hypothyroidism is the most frequent but at the same time the most overlooked condition in the USA. Whilst the condition can be rectified by thyroid hormone therapy, obviously the correct solution to the problem is to correct the diet. Another related effect of eating excess protein is hyperinsulinemia, the production of excess insulin which in turn can reduce blood sugar levels down to hypoglycemic levels. In animal tests, elevated levels of insulin have stimulated cholesterol synthesis in the arterial wall resulting in atherosclerotic plaques.

Hyperinsulinemia, sometimes called insulinoma, leading to severe hypoglycemia can cause the patient to display neurological and psychiatric disorders such as coma, confusion and other impaired faculties.

A recent report in the *Sydney Morning Herald* said that in US Government tests, 200 rats were put on high protein diets similar to those blamed for the deaths of 16 women. Within a month, 189 rats died.

Dr Gary Williams, Chief of Experimental Pathology at Westchester's Naylor Dana Institute for Disease Prevention said: "All people on the high meat/fat diets have the same metabolic profiles as those associated with increased cancer risk in experimental animals. And protein has been shown to increase tumors in the high risk animals".

When, in the 60s, I was imbued with the "High Protein" belief, reading Adelle Davis, Gayelord Hauser and Lelord Kordel, I read a book, *Health Secrets from Hunza* by Renee Taylor. (I referred to Hunza earlier. It is a community in a valley where the Hindu-Kush and the Kara Korum Ranges meet at the western end of the Himalayas, near where the borders of Pakistan, Afghanistan, Russia and China converge.) I later met Mulford Nobbs of New York, publisher and cosmetics manufacturer, who was a member of the same expedition as Renee Taylor. He screened his color slides of Hunza for me with a first-hand description. Another book, *The Wheel of Health*, by Dr G. T. Wrench of London (1938) also described the Hunza diet. I was confused because it seemed to me at the time that the Hunza hardly ate any protein. How then were they such fine specimens with fantastic vigor and endurance into old age?

A little later again when my first wife spent some weeks at the Hopewood Health Center at Wallacia and was wonderfully improved in health, I realized that the diet there was virtually identical to the Hunza diet. So I abandoned the "High Protein" diet to an almost vegetarian diet which (as most vegetarian diets do) still contained a lot of fat from dairy products, nuts and oil. I felt no different but I figured it was better anyway, and when eventually the Pritikin diet came to light, I could instantly understand and accept it.

Here are some assessments of daily protein requirements for average adults:

US National Academy of Science	34 gm
Dr Rayner Berg, Swedish Nutritionist	30 gm
Dr V. O. Siven, Finnish Scientist	30 gm
Dr R. Chittenden, USA	30 gm
Dr D. M. Hegsted, Harvard University	27 gm
Dr W. C. Rose	20 gm
US Food & Nutrition Board	34 gm
Canadian Board of Nutrition	34 gm

Even on a vegetarian diet without dairy products, it is difficult to reduce protein to this level, and the inclusion of nuts and beans in a vegetarian diet to provide protein is completely unnecessary and in the long run, harmful.

Most vegetarians still include cereals in their diet as a source of protein and energy but even cereals are superfluous because fruit and vegetables alone can provide sufficient protein. The problem with a diet of just fruit and vegetables, if a person leads a very active life, is not protein, but getting sufficient calories, and it becomes necessary to eat frequently throughout the day. Such a diet is low in fat, and people on it are always lean and healthy. The utter fallacy of the Western high protein diet, containing perhaps 20% total calories in protein, is obvious when it is considered that the most natural food possible--mother's milk, on which an infant can double its weight in three to six months--contains only 6% protein, measured as a percentage of total calories, and this amount reduces to about half after six months. The diet of healthy West New Guinea Highlanders examined in 1969 contained only 3% protein.

Here are two menus for a day--protein in grams:

### **No. 1 -- High Protein**

#### **Breakfast**

Orange juice (3), 2 fried eggs (14),  
1 slice bacon (15), 2 slices toast (4) 36 gm

#### **Lunch**

Baked flounder (100), fried potatoes (5),  
beans (2), fruit (3) 110 gm

#### **Dinner**

400 gm T-bone Steak (100), potato (5),  
vegetables (5), fruit (3) 113 gm

Total--259 gm

### **No. 2 -- Low Protein**

#### **Breakfast**

1 glass fresh orange juice (3),  
muesli ( 12), fruit (3) 18 gm

#### **Lunch**

Fresh salad (5), wholegrain bread (2),  
fruit (6) 13 gm

#### **Dinner**

Lightly cooked vegetables (5), raw salad  
vegetables (5), fruit (6) 16 gm

Total--47 gm

This low-protein menu is a typical strict vegetarian diet. Most dieticians would faint at the low protein level and yet it contains, even without nuts and lentils, almost double the required amount of complete protein. There are many healthy vegetarians around who eat less protein and have done so for years.

Protein is essential for life, but far more people die because of excess of it than because of too little.

## **Carbohydrates**

Most of the calories contained in food, regardless of the kind of diet, go to provide energy. Any excess, after energy and protein requirements are met, are stored as glycogen in limited amounts in the liver and muscle tissues, and the rest as fat, in unlimited amounts all over the body.

To provide the body with energy, the bloodstream requires a constant supply of carbohydrate in the form of glucose (blood sugar), and fat in the form of free fatty acids, so it can deliver them to all body cells. The brain and nervous system use glucose exclusively and the muscles use both fat and carbohydrate in proportions which vary with the intensity and duration of work.

The sort of food which best provides these fuels is a diet of fruit, vegetables and cereals. Fruit and

vegetables are best eaten raw and provide a desirable alkaline condition to the blood. Cereals require cooking to facilitate digestion, and because their starch is a more complex type of carbohydrate, the digestion may take longer.\* Cereals also contain a good deal of protein, and in one form or another form the basis of sustenance for most of humanity. With the exception of millet and buckwheat, cereals are acid forming and should be eaten sparingly. Rice perhaps is the best because it is digested much easier than the other cereals and is less acid forming.

\*This statement may not be true of all cereals. For instance, it has recently been discovered that wholewheat bread, pasta and some cooked vegetables such as carrots and parsnips, release glucose into the bloodstream at an undesirably rapid rate. (See Cereals.) See also statement by Dr. Howell in Chapter 21.

Natural carbohydrate foods as they are digested provide a steady supply of glucose into the bloodstream, and when the carbohydrate is metabolized, the only byproducts formed are carbon dioxide and water, natural substances and completely harmless. The blood sugar level remains constant and the body feels good, the brain alert.

Carbohydrates may be classified as starches (complex), or sugars (simple); some foods contain both. Whereas starch is composed of complex molecules which are more difficult to digest, sugar is a simple molecule carbohydrate and is rapidly digested. Refined or cooked carbohydrates of any kind can cause temporary excesses in blood sugar levels which the body converts to triglycerides (see Chapter 21). This effect, if exaggerated, is undesirable, it increases blood viscosity and may result in low blood sugar (hypoglycemia).

There are different kinds of sugar in all food, and natural sugars in raw fruit and vegetables taken in moderate quantities are ideal nourishment, and do not cause big excursions in blood sugar. Fructose (fruit sugar) and galactose (milk sugar) taken in raw fruit and raw milk are accompanied with complex carbohydrate and natural enzymes and do not overtax the body. Nevertheless, fruit is better eaten at spaced intervals rather than large amounts all at once, and eaten whole rather than juiced. Ripe fruit contains more sugar than green fruit, because the ripening process converts the more complex starches to natural sugar. Dried fruits are nourishing but very concentrated so should be eaten in small quantities. As mentioned earlier, a properly selected mixed fruit diet contains small but sufficient amounts of protein as well as small but sufficient amounts of fat.

Any food refined for commercial purposes is depleted in nourishment and is harmful for a number of reasons. White flour is not only poor in nourishment and capable of upsetting body chemistry to the extent of causing arthritis, but at the same time is devoid of natural fiber and therefore tends also to cause constipation.

Ordinary white sugar or brown sugar is sucrose, a combination of two simpler sugars, glucose and fructose, and is derived from the sap of plants but without the plant's nourishing properties. Because the glucose and fructose are chemically bonded together in sucrose, they are not available for use in the body until digestive enzymes split them apart, whereas in nature both sugars as found in fruit, honey and nectar are already apart and enter the bloodstream without effort or excursion. Honey is a derivative of plant nectar and consists largely of fructose and glucose unbonded, and when found in natural beehives and not heated or processed, contains sufficient mineral salts and other nutrients together with natural enzymes to make it a nourishing food.

All refined carbohydrates, including raw sugar, treacle, molasses and processed honey, whether in drinks, cakes, confectionery or other forms, can cause disruption to normal blood chemistry with adverse physical and mental effects such as hypoglycemia, headaches, depression, hyperactivity, irrational or violent behavior, high blood viscosity, angina etc.

Refined carbohydrate, devoid of vitamins itself, still requires Vitamin B<sub>1</sub> to be metabolized in the body. Thus it will utilize body stores of Vitamin B<sub>1</sub> and this can lead to chronic deficiency of the vitamin. A Vitamin B<sub>1</sub> deficiency causes underactivity of the thyroid gland (which controls cholesterol production in the body) resulting in elevated blood cholesterol, triglycerides and lessened body metabolism and vitality.

No wonder Professor John Yudkin of London called his book *Sweet and Deadly*. In Britain, he says, sugar intake is 25 times the amount that it was a couple of centuries ago. *Natural Health, Sugar and the*

*Criminal Mind* by J. I. Rodale describes how criminal and vicious tendencies are induced by high sugar consumption. And yet the sugar industry still tries to "con" the public that their sugar is good for you!

You cannot eliminate sugar from your diet without making some drastic changes in the type of food you eat. The Consumers Union of the USA has analyzed a number of common food products and found that some of them contained more sugar than candy, ice cream and soft drinks. Heinz Tomato Ketchup, for example, had more sugar in it (23.9%) than Sealtest Chocolate Ice Cream (21.4%). Wishbone Russian Dressing was 30.2% sugar, and Coffee Mate, a substitute for cream, was 65.4% sugar compared to 51.4% for Hershey's milk chocolate. Cherry flavored Jell-O contained 82.6% sugar. Quaker 100% Natural Cereal contained 23.9% sugar and Hamburger Helper 23%.

According to the US Department of Agriculture, 27% of refined sugar consumed in the USA in 1977 was in beverages, mostly soft drinks. The remainder was consumed as follows:

Retail sugar packages	25%
Bakery and cereal products	17%
Confectionery	10%
Conned or frozen fruits and vegetables, jellies and preserves	8%
Dairy products	6%
Public eating places	3%
Institutions	1%

At a NSW Education Department organized seminar on nutrition for school children, it was reported that popular brands of breakfast cereal contain about 50% sugar, even All Bran had 18%. The Vitamin C drink, Tang, had 94%. Ice cream, flavored milk and yoghurt can contain large quantities of sugar. Practically all canned and packaged food contains large quantities of sugar or salt or both, even some brands of bread.

#### **Sugar contents of some breakfast cereals\***

Product	% Sugar Content by weight
Kellogg's Honey Smacks	52.2
Kellogg's Froot Flavored Loops	51.7
Kellogg's Strawberry Pops	46.0
Kellogg's Frosties	44.2
Kellogg's Nutri-Grain	43.7
Kellogg's Coco Pops	40.9
Kellogg's Sultana Bran	33.4
Kellogg's Bran Buds	29.7
Sanitarium Honey Weets	28.0
Sanitarium Weeta Puffs	25.8
White Wings Original Bran Crunch	25.4
Sanitarium Crunchy Granola	24.9
Sanitarium San-Bran	24.1
Kellogg's All-Bran	18.1
Sanitarium Golden O's	16.9
Kellogg's Special K	16.7
Nabisco Extra G	15.9
Kellogg's Bran Flakes	12.0
Sanitarium Popped Rice	11.4
Nabisco Crispies	9.6
Sanitarium Skippy Corn Flakes	9.4
Kellogg's Rice Bubbles	8.8
Sanitarium Mini Weet-Bix	8.3
Kellogg's Corn Flakes	7.4
Sanitarium Weet-Bix	4.0
Nabisco Vita Brits	3.3
Sanitarium Puffed Wheat	3.2
Kellogg's Ready Wheats	2.9
Nabisco Weeties	2.9
Nabisco Shredded Wheat	2.2

\*Total sugars after hydrolysis.

*Choice, 1979*

Health food confectionery substitutes and "energy" bars etc. are practically all sugar of some kind. And if the bulk of your food comes out of a supermarket then you are getting lots of sugar, salt and fat whether

you like it or not. Sugar addiction in this country is one of the greatest menaces to the health of our population.

Alcohol is a refined carbohydrate and should be avoided. It is common for doctors to allow heart patients to drink a little whisky, and some even advise it because they believe it dilates the arteries and allows better circulation. In fact, the only vessels which dilate are those in the skin, and because alcohol elevates blood triglycerides and impairs oxygen respiration of the tissues, its use serves no good purpose.

## **Fats**

The main function of fat in our bodies is to provide muscular energy. Where stored in the body it acts as padding and insulation. It is not necessary to eat it, the body can convert protein and carbohydrate into all the fat it needs with the exception of "essential" linoleic acid. The amount of linoleic acid required is so small that any diet of adequate calories must provide ample. Even lettuce has a fat content of about 9% of total calories.

The worst fault with the Western diet is that it contains concentrated fats far in excess of the body's capability to safely handle, and whether saturated, unsaturated or polyunsaturated, is the most singularly dangerous factor involved in every one of the so-called degenerative/metabolic diseases, including cancer. However, the danger of dietary fat is far less if it is consumed raw as in raw milk or raw blubber as eaten by Eskimos. The reason for this is explained in the discussion on raw food.

When a typical meal is digested, the fat content is mainly absorbed into the lymph vessels and only a small part, glycerol and short chain fatty acids, are taken up by the intestinal capillaries. Thus most of the fat at first completely by-passes the liver and enters the bloodstream via the neck veins. Now the liver is the largest gland in the body, capable of over 500 complex functions, and yet it receives these fats not from the intestine with the rest of the nutrients, but via the main bloodstream in a manner and quantity not intended by Nature.

On a high fat diet with insufficient carbohydrate, the body must rely on fat and protein to provide its energy needs. In this process compounds called ketones are produced which in high concentrations can produce kidney damage. The efficiency of fat metabolism depends on the degree of physical fitness and is further discussed in Chapter 17.

Fats are a natural component of vegetable foods, and consumed that way, they are beneficial. All evidence points to animal fats as being dangerous, correlating directly with high cholesterol levels and the incidence of heart disease. Its correlation to cholesterol is unavoidable as animal fat itself as well as animal protein, contains cholesterol. Consumption of polyunsaturated vegetable fats and oils does not correlate with the incidence of heart disease, but it does correlate with the incidence of cancer and can precipitate heart attacks in people with heart disease. It was found, about twenty odd years ago, that when polyunsaturated vegetable fats were substituted in the diet for saturated fats, blood cholesterol decreased and here is where dangerous confusion arises. Because of this confusion, following the advice of the National Heart Foundation, I nearly killed my wife with the best quality cold-pressed safflower oil and polyunsaturated margarine.

The reason the cholesterol level falls is because the saturated fat, which contains cholesterol, has been removed from the diet and because polyunsaturated fat causes cholesterol to be deposited from the blood directly into the body tissues including the walls of the arteries. The cholesterol reduction occurs whether polyunsaturated fat is present or not present. Messrs M. L. Armstrong and M. G. Megan in 1972 demonstrated this with two groups of monkeys, one fed a diet containing 4% of the calories as fat and the other a diet containing 40% polyunsaturated corn oil. Both diets produced the same degree of regression of atherosclerosis with substantially decreased cholesterol in the blood and in the artery walls. A more recent study by Messrs Chakravarti, Kumar and Nair in 1977 using 40% safflower oil showed the same results.

It is a different story if cholesterol is added to such diets. When groups of monkeys were fed diets

containing 50% fat with the addition of 2% cholesterol, regardless of the type of fat--peanut oil, corn oil or butter oil--the monkeys all developed cardiovascular disease, the peanut oil being the worst. Because of its apparent effect of lowering blood cholesterol, polyunsaturated fat was assumed to be beneficial to people with cardiovascular disease. When in fact it was the very opposite.

It is most important to understand that the acquisition of coronary heart disease is one thing, and that the factors triggering off angina or a heart attack after having acquired advanced heart disease, is another thing altogether, and polyunsaturated fat such as margarine or oil in the diet can trigger off angina and heart attacks in susceptible people like nobody's business. Not only has concentrated polyunsaturated fat been shown to have no beneficial effect on diseased arteries, it causes cholesterol to concentrate in the liver, causing gallstones. It has also been shown to depress Vitamin B synthesis by the intestinal bacteria, to increase the requirement for Vitamin E, and to depress calcium absorption.

The ingestion of free polyunsaturated fat causes severe red blood cell aggregation, reducing the blood's oxygen capacity and increasing its viscosity to a greater extent even than saturated fat. High intake of polyunsaturated fat is associated with an increased incidence of cancer, partly because of this effect on the blood.

In a test at the V A Hospital in Los Angeles, polyunsaturated fats were largely substituted for saturated fats in the diets of 422 men, and a control group of 424 men remained on the typical American diet. The test group sustained 5% less deaths from heart attacks, but the incidence of gallstones and cancer increased and the total deaths were the same.

Dr Meyer Friedman, co-author of *Type 'A' Behavior and Your Heart* noted that in tests on 44 firemen comparing the effects of butterfat and safflower oil on the bloodstream, the safflower oil caused the same degree of red cell aggregation as did the butterfat cream. But worse, the safflower oil drink elevated triglycerides to a higher level and whereas the butterfat triglyceride level returned to normal after nine hours, the safflower level at nine hours had not even started to fall.

But popular beliefs are hard to shift. J. I. Rodale, a dedicated proponent of natural living and author of several books about it, and who was founder of *Prevention* magazine available worldwide, died of a heart attack in his early seventies while being interviewed on TV. He advocated in his book *Rodale's System for Mental Power and Natural Health*, the inclusion in the diet of plenty of meat, fish and eggs, safflower oil, corn oil, soybean oil, sunflower oil, olive oil and honey. The books of Lelord Kordel, Gayelord Hauser and Adelle Davis are similar in that they advocate diets containing excess protein, cholesterol and fat.

Adelle Davis died of cancer, and more recently Gayelord Hauser died of heart disease.

We must judge by results. Wherever in the world you look, Finland, USA, Africa or New Guinea, people on high fat/cholesterol diets get clogged up arteries and cancer, and people on low fat diets do not.

## **Salt**

It is totally unnecessary to add salt to food. It is a harmful irritant conducive to high blood pressure, cardiovascular disease, kidney damage, edema, arthritis, migraine and cancer. Perhaps the main danger from salt is its effect of inhibiting enzymes, which is the reason it works as a food preservative. Sea salt and monosodiumglutamate are equally harmful, and various salt substitutes should be avoided. Adequate organic sodium is provided in fruit and vegetables.

Salt is expelled by the body in the urine and perspiration, and thirst is induced to replace the water lost thereby. Unless the water is replaced, dehydration may occur which of course increases the blood viscosity. At the same time salt retained in body tissues extracts water into those tissues where it may be retained to cause swelling known as edema. The swelling not only restricts oxygen transfer to the tissue cells but exerts pressure on the capillary vessels further impeding the circulation.

Even before it is absorbed by digestion, salt is a harmful irritant in the digestive tract. Damage can be

caused to the stomach lining by osmotic pressure which is the property of a substance to absorb water to itself. Salt (and to a lesser extent sugar) taken in large amounts on an empty stomach can be observed through a gastroscope to inflame the stomach lining as cells shrivel when the water is robbed from them. Japanese have a high incidence of stomach cancer which is thought to be associated with their high salt intake. It has been observed in Japan that such inflammation may persist for two weeks after the intake of salt has been stopped. The Japanese also have the highest rate of hypertension in the world, which is undoubtedly due to their high salt intake. Also associated with dietary salt is the retention of uric acid in the body.

It is a fallacy that salt should be taken to counter that lost by perspiration. It is expelled by perspiration because the body wants to get rid of it. Once in Singapore I got bushed in jungle behind the Bukit Timah Reservoir. I hiked for five hours, lost a gallon (10 lbs) of water from my body in the midday heat and although desperately thirsty, not once felt tired or cramp.

As more knowledge is acquired throughout the world, many fallacies are being dispelled. One of these fallacies is that endurance athletes require extra salt, particularly in hot weather. It has been shown repeatedly that regardless of temperature, long distance runners perform best on diets free of added salt.

*Salt and Premenstrual Tension:* "Up to 90% of women suffer needlessly from premenstrual tension during their childbearing years," said Dr Niels Laverson, Associate Professor of Obstetrics and Gynecology at Cornell University. "By simply giving up or severely restricting the amount of salt in their diet many of them can cut out the aggravating feeling of moodiness, depression and bloatedness." Dr Laverson is the co-author of *It's Your Body--A Woman's Guide to Gynecology*. He explained: "The week before a woman has her period, there is a build up in her body of two hormones--progesterone and estrogen. Estrogen binds salt to the body and salts bind water. The result is a build-up of water which causes pre-menstrual tension, excess fluid in the brain causes headaches. Fluid in other parts of the body causes fatigue". (See Menstrual problems, Chapter 21.)

## Meat

All animal protein foods tend to be harmful in a number of ways. They introduce too much protein into the diet, they contain too much fat and they contain cholesterol. When cooked they produce cancer-inducing chemicals and are devoid of enzymes. They are also devoid of fiber and therefore cause constipation.

When beef is raised in stalls and especially fattened by the use of hormones and overfeeding, the fat content of the meat is increased enormously, but long before this practice was adopted by meat producers, observant medical men always have noted the markedly adverse effects of eating meat.

Dr Arnold Lorand of Austria in his book, *Old Age Deferred* (1910) devoted an entire chapter to the "Dangers of an Abundant Meat Diet". He had observed, and he quoted a number of other medical researchers who had observed the following facts:

1. After eating much meat, nervous disorders are far more frequent.
2. There are many more instances of neurasthenia and hysteria among meat eaters than vegetarians.
3. In the treatment of many nervous disorders, far better results are obtained after excluding meat from the diet.
4. The symptoms of Graves disease and myxoedema are aggravated after partaking of meat.
5. Meat produces high levels of toxins in the system which impose a strain on the vital organs.
6. The thyroid gland, liver, kidneys, pancreas and other ductless glands become altered and finally damaged on a high meat diet.
7. The thyroid enhances the catabolism of fat, and if the thyroid function is impaired, atheroma of the aorta may follow.
8. A diet high in meat causes gout and arteriosclerosis.
9. A diet high in meat often results in cancer.
10. Diabetes sometimes results from a diet high in meat and if already present will be exacerbated.



11. The viscosity of the blood is increased and circulation reduced.
12. Meat produces acids in the system which can, to a great extent, be counteracted by eating lots of fruit and vegetables.
13. Meat does not stimulate peristaltic movements of the intestine and the intestinal transit is slow with resulting putrefaction and constipation.
14. Resorption of toxins from the constipated bowel inflicts further strain on the kidneys.

Dr Lorand further observed that white meats and fish (except salmon, carp or red fleshed fish) are more easily tolerated by body.

Having described the special function of the thyroid gland, working together with other glands, in destroying toxins produced in the body from meat, Dr Lorand explained how meat could be rendered much less harmful by boiling it instead of roasting. Boiling removed certain harmful substances which he did not define, but the proof he furnished is as follows:

Dr Leo Breisacher of Detroit demonstrated that when dogs were deprived of their thyroid they could survive for a long time on a diet of milk but on meat they died in a few days. Similarly, dogs without a thyroid could survive a long time if fed boiled meat, but died if fed the bouillon made from meat.\*

\*Dr de Lacy Evans, quoted earlier, before devoting his career to natural medicine, was a surgeon in a cancer hospital. He said, "When meat is given, it should be boiled, and the liquid broth, soup or beef tea, thrown away. It contains the irritating constituents of flesh which encourage the growth of cancer".

Dr Lorand said: "Every physician can observe daily, as we have, that when patients suffering from disorders of the liver take meat, they gradually get worse, but when they gave up meat they soon got better," and finally:

"When we study the nature of the diet enjoyed by persons who have lived over 100, we find, indeed, exceedingly few who are great meat eaters; very many are persons who eat no meat at all; and in many cases, also, the original meat diet was subsequently abandoned in advanced age. According to the report of the Collective Investigation Committee of the British Medical Association, the 55 centenarians whose cases they examined, were for the most part, small meat eaters."

The International Agency for Research on Cancer in 1977 reported that although total fat consumption in Copenhagen is lower than in rural Finland, the meat consumption is higher, and so is the rate of colon cancer, which is four times higher in Copenhagen.

Meat, Of course, not only contributes protein, fat and cholesterol, but as inferred, appears to contain substances which are specifically carcinogenic, at the same time being conducive to the condition of constipation.

## **Poultry**

The meat of fowls contains fat and cholesterol, and therefore the same objections as against meat are held, but to a lesser degree, against it. Apart from these objections it should be remembered that a great variety of chemicals is used in chicken feed to promote the growth of the chickens as well as certain preservatives in the feed itself, the harmful effect of which is passed on to whoever eats the chicken.

## **Fish**

Fish from unpolluted waters is the least toxin-producing of the animal Protein foods. It can be eaten raw. If fish is marinated in lemon juice and then warmed a little before eating, its texture and taste is the same as if it was cooked. Ocean fish provides a better source of minerals.

The advantages of fish as a food, particularly if consumed uncooked, have already been explained and are further discussed under "The Value of Raw Food".

## Cereals

Cereals of one kind or another provide the bulk of the energy in the diets of most people world wide, and for many they also provide the bulk of the protein. However, they cannot be said to be a natural food for humans because they do not abundantly occur in nature, having only comparatively recently been developed by man as a crop food.

Despite their nutritional qualities, cereals do not provide balanced nourishment, and in some ways are quite harmful if eaten in large quantities. The fact alone that cereals contain absolutely no Vitamin C is enough to disqualify them as a highly suitable food for humans. (See discussion on Vitamin C.) With the exception of millet and buckwheat, they are acid forming in the body, and even when cooked are comparatively difficult to digest and produce flatulence. In food allergy tests, after eggs (33%), wheat products excite the greatest percentage of reactions (30%) in those tested. Cereals are known to exacerbate arthritis and diabetes in some people, and populations which consume them in great quantities are not long lived.

Studies made by various medical researchers in the 1800s described by Dr Emmet Densmore of England in his book, *How Nature Cures*, incriminate cereals, wheat in particular, in causing deposits of calcium salts in the tissues, and hardening of the arteries. Similar tissue degeneration was noted in Indian people whose diet consisted mainly of rice.

Furthermore, bread and other cereal-starch foods are the prime cause of the acids formed in the mouth which attack and decay teeth.

World Wars I and II in Europe provided valuable information on nutrition, but this has been misinterpreted and wrong conclusions have been formed about cereals. As mentioned earlier, autopsies of concentration camp victims fed on meager scraps showed complete clearance of fat deposits in their arteries. In Austria, where all civilian deaths require a full autopsy, statistics showed that between 1939 and 1945 heart attacks decreased by 75%. Does this mean that the wartime Austrian diet, dependent on potatoes and cereals, likewise cleared their arteries of atherosclerosis? It certainly would appear so, but that is not the case.

In his book *Solved: The Riddle of Heart Attacks*, (Robinson Press, Fort Collins, Colorado 1976), Dr Broda Barnes MD, PhD, related:

"I have personally reviewed 70,000 autopsy protocols at Graz, Austria, carried out between the years 1930-1970. At Graz, heart attacks dropped 75% between 1939 and 1945, and it is true that people were not eating cholesterol foods during the war. However, the low cholesterol diet did not protect their arteries from hardening. A look at the arteries of the entire series of 2,000 autopsies in 1945 revealed that the number of individuals with damage to their coronary arteries was approximately doubled in 1945 compared to 1939, and the degree of damage to each one affected was about twice as great. In other words, the low cholesterol diet had not only failed to protect the arteries, but the damage was increased four-fold."

Why then did heart attack deaths fall when the heart disease rate increased? Dr Barnes says tuberculosis killed the people before they could have their heart attack, but the disparity in numbers is too great for that to be the major reason. It is far more likely that the heart attack rates fell because of the drastically decreased fat in the diet which would result in lower blood viscosity and better circulation even in worsened arteries.

Dr Edward Howell, formerly of Chicago, (see Chapter 6) in his book *The Status of Food Enzymes in Digestion and Metabolism* (1946), described extensive clinical research which among many other things revealed that Malays and Filipinos, who subsist mainly on rice, develop marked hypertrophy of the pancreas. The pancreas is the organ which produces essential digestive enzymes in addition to its job of producing insulin. Hypertrophy of an organ indicates it is being overworked. Compared to the average not-overweight American (who, the studies showed, also had an enlarged pancreas), the Malays and

Filipinos pancreas' were, in proportion to total body weight, 50% larger. Compared to herbivorous animals, the rice-eaters pancreas were 300% larger. (See discussion on raw food.)

Damage to the intestinal lining and subsequent impairment of the digestion is called coeliac disease, characterized by the inability to digest cereals containing gluten (eg. wheat, rye, barley and oats) with relatively poor absorption of other nutrients as well. Coeliac disease is caused by the feeding of cereals to infants before their intestines are developed sufficiently to withstand their damaging effect. Thus the condition is permanent and is exhibited as a lifetime allergy to cereals.

Recent experiments by Dr E. W. Williams, University College of North Wales, UK, showed that wheat protein is antigenic to rats. It causes hyperactivity to rats not used to them, and increased activity in those that are. In addition, Dr Williams found that the intestinal villi of the rats whose diet included wheat protein changed in shape from long and slender to shorter and blunt. Similar villous atrophy has been observed in humans, he said.

Dr Herbert Shelton, one of the best-known and most experienced researchers in nutrition of the 20th Century, said of cereals: "Of all starch foods eaten by man, cereals, along with legumes, are the least fitted to the capacities of his digestive organs and are also least well-fitted to meet the nutritive needs of his body".

As a staple food, rice is far preferable to wheat, or oats. It contains a lower, more desirable level of protein, is less acid forming, more nourishing, and leaves less toxins and residues for the body to dispose of. To offset the undesirable properties of cereals, they should be accompanied by fresh fruit and vegetables.

Notwithstanding their disadvantages, cereals, as the basis of most national diets, and in combination with vegetables and fruit, sustain people in good health for many years. The health-promoting qualities of the Pritikin diet which relies heavily on cereals, are indisputable, and even healthy athletes who change to it from the conventional diet experience improved mental and physical performance.

However, the same or better performance can be gained without cereals. For instance, in 1978 John Marino of Santa Monica, set a new USA cross-country bicycle record of 13 days, 1 hour and 20 minutes. In 1979, on a diet high in rice and wheat, he tried to better that record but could not complete the ride due to dizziness and fatigue, and later found he was allergic to these foods. In 1980, on a diet of fruit, vegetables, beans and fish, he knocked over 21 hours off his 1978 record to create a new one of 12 days, 3 hours and 41 minutes, and said he felt he could have continued riding, perhaps even back to Santa Monica.

My reservations about cereals began not long after I adopted the Pritikin diet in 1976, and started eating lots of oatmeal and wholegrain bread.\* I started getting twinges of arthritis in my right elbow and occasional symptoms of hypoglycemia. When I cut right down on bread and ate more fruit these problems vanished. Then I noticed that although some people on the Pritikin diet were rapidly clear of arthritis, others still had it in varying degrees and could only gain relief by eliminating wheat products and oats. Other people complained of dry skin. Another query arose from a 55-year-old acquaintance who benefited greatly in health from the Pritikin diet but after two years was still experiencing prostate trouble and had developed a fibrous cyst which was removed surgically. His prostate problem was eliminated after he cut out eating cereal products and replaced them with raw fruit.

\*In Radiant Health Digest, July 1936, Dr Howell reported tests from the University of Tennessee which showed that contrary to long accepted opinion, the carbohydrate from wholewheat bread is digested and absorbed very rapidly into the bloodstream, as is also the starch of cooked potato. These facts have been rediscovered by Dr David Jenkins of the University of Toronto, who measured the 'glycemic ratings' of different foods. His findings, released in 1983, showed that wholewheat bread, pasta, cooked carrots, and other unsuspected complex carbohydrates, instead of releasing glucose slowly into the bloodstream, did so at a rate faster than did table sugar or ice cream. This means that some so-called unrefined carbohydrate foods, once cooked, no longer are protective against excursions of blood sugar and triglycerides, but instead are capable of causing such excursions. (See Hypoglycemia, in Chapter 21.)

My studies of the effects of various diets on achieving remissions of cancer led me further to dispute the value of cereals and cooked food and the specific reasons I have described elsewhere in this book. Additionally, it is significant that the primitive people upon whose diets the Pritikin diet is modelled,

although not heirs to the diseases of civilization, at the same time are not renowned for their longevity. I was eventually forced to the conclusion arrived at by Dr de Lacy Evans, Dr Densmore, Dr Howell and others, many years ago, that although cereal-based diets are far preferable to a diet based on animal protein foods, the benefits gained come not from the cereals, but from the exclusion of animal protein, fat and cholesterol, and that greater benefit still can be gained by displacing cereals from the diet with fruit and vegetables. This conclusion was not shaken when in May 1983 Dr Paavo Airola, one of the most widely read nutritionists in the world, whose books promoted cereals above all other foods, died of a stroke at the age of 65.

## **Sprouted cereals**

Seeds which have sprouted form a completely different foodstuff altogether. They are very nutritious in that the enzymes are no longer inhibited, starch is converted to easily digested natural sugars, and various vitamins become available. Eaten in this form cereals are a desirable food substance. Even seed-eating birds are only able to digest seeds after germination has begun; they are equipped with a crop in which the seeds remain after swallowing until ready for digestion.

## **Nuts**

Nuts are similar to cereals inasmuch as they are seeds and as such contain enzyme inhibitors which make them hard to digest. Like cereals, they are more easily digested after roasting because this deactivates the enzyme inhibitors. Despite cooking, they are still difficult to digest, and because they contain high levels of fat and protein, nuts cannot be considered a desirable source of nourishment, regardless of whatever nutritional virtues they do have.

Although it is generally believed that nuts are a natural food for man, Dr Edward Howell's studies show that the wild primates eat them only before they are fully grown, i.e. before the enzyme inhibitors are formed. Squirrels keep nuts in their cheek pouches sometimes, and at other times store nuts in a damp place, presumably in both cases to render them more edible.

In 1927, Dr Howell, as a young man, adopted an all raw food diet composed to a very large extent of raw nuts. He soon became ill with troubled digestion and general malaise and was forced to abandon the diet, which left him with permanently impaired digestion. At that time nothing was known about the enzyme inhibitors in seeds (nuts are seeds), but it can now be seen why raw cereals and nuts present digestive problems and why these foods are more easily digested cooked. Pritikin bans nuts on the score of fat alone.

## **Milk**

Milk, when it is provided from the mother's breast, is a perfect food for a baby, providing of course that the mother herself is healthy and on a nutritious diet.

Because in the past many undernourished children have benefited from cow's milk given them at school, milk has gained a reputation as being essential for growing children.

Milk is not a natural food for any species of animal except for the very young fed by their own mother. Mothers' milk is structured exactly to the requirements of the infant, changing slightly as the child grows. According to Dr Steven Gross of Duke University, even when a child is born prematurely, the milk of the mother at that time has different concentrations of protein, sodium and chloride, suited specifically for the premature infant's needs. It was important, said Dr Gross, that premature babies be fed milk from the natural mother and not other human milk or milk formula because milk other than from the baby's own mother could not be properly tolerated. Even after normal births the mother's milk continued to change in protein content etc. to suit the needs of the baby as it grew. Apart from nutritional aspects, the natural mother's milk contained immunological substances which convey protection against infection until the

infant's own immune system developed.

And because in early life babies do not manufacture in their bodies sufficient enzymes for normal body metabolism, they are dependent on the natural enzymes furnished in their mothers' milk. The danger of feeding babies formula or pasteurized milk, devoid of enzymes, can be seen to be a major factor in the cot death problem (see Chapter 21).

Cow's milk is responsible for more allergies than any other substance (see the section on allergies later in this chapter and also Chapter 19). British studies, reported in the *Archives of Disease in Childhood*, found that up to 40% of children were sensitive to it. Another study, in Denmark, showed there has been a dramatic fall in the incidence of childhood diabetes since breast-feeding has come back into vogue.

Cow's milk contains a fair amount of fat and cholesterol, is practically devoid of Vitamin C, and has three times the amount of sodium compared to human milk. As already mentioned, cows' milk contains over twice the amount of protein as human milk and can cause hypernatremic dehydration in bottle-fed babies because of the large amounts of water required to flush from the body the waste products of protein metabolism. Thus cow's milk causes the problem of bed-wetting, 90-95% of all cases being attributable to it.

Even when it is necessary to wean a baby early, there is no necessity to give the child cow's milk. Tests have shown that whether cow's milk, a mixed diet, or a vegetarian diet is given, the growth rate is the same.

Milk cannot be considered a good food, particularly pasteurized, and together with other dairy products should be avoided, except perhaps for small quantities of raw milk and non-fat milk products. Although raw milk contains valuable nutrients in addition to its harmful ones, much of these are destroyed if the milk is pasteurized.

A medical paper, *The Effect of Heat Processed Foods and Metabolized Vitamin D Milk on the Dentofacial Structures of Experimental Animals* by Dr Francis Pottenger (1946) described tests on cats where one group was fed raw milk, another group pasteurized milk, and a third group evaporated milk and condensed milk. The experiment was continued for four generations of cats.

All generations on the raw milk group thrived. The other two groups deteriorated from the start. They suffered a lowered condition and the second generation was depleted by stillbirth, miscarriage, spontaneous abortion, or resorption in the uterus. The survivors had many defects which included eczema, calcification of tissues, anatomical defects, neuroses and abnormalities in neuromuscular co-ordination. Anatomical differences between the sexes became less apparent and homosexuality appeared.

The third generation was greatly depleted and there was no fourth generation at all; there was not even an attempt at reproduction by the third generation.

In another paper by Dr Maurice Bowerman of Beaverton, Oregon, titled "Milk and Thought Disorder" (*Journal of Orthomolecular Psychiatry*, Vol 9, No 4, 1980), Dr Bowerman described the damaging effect of milk on five of his psychiatric patients who had suffered for years from confusion, detachment, poor memory, poor mental efficiency, and paranoid thinking, all accompanied by fatigue. Two had been hospitalized. When milk was removed from their diets four patients became symptom-free and the fifth improved.

Dr Howell points out that once upon a time people maintained vigorous health and achieved long life on diets containing large amounts of dairy foods. But this was before the era of pasteurization.

One reason for the harmful effect of pasteurized milk, according to Dr Howell, is the destruction of the natural enzymes present in raw milk which are at least 35 in number, without which enzymes milk cannot be properly digested. No wonder infants develop allergies to milk and dairy products. One of the most important enzymes in raw milk is lipase, the enzyme which breaks down fat, says Dr Howell. Thus raw dairy products do not result in high cholesterol levels and the rapid onset of atherosclerosis.

## **Yoghurt**

Yoghurt has for a long while been accepted as a health promoting food, and the evidence usually quoted to support this belief is the supposed longevity of people in Bulgaria who regularly consume yoghurt.

Investigating this belief, experiments by American and French doctors in the 1890s and early 1900s on both animals and humans, showed that lactic bacillus cultures from yoghurt included in the diet brought about a diminution of intestinal putrefaction caused by harmful anaerobic bacteria which accompanies meat in the diet. Thus yoghurt taken with the Western high fat/meat diet must convey some benefit at least if the yoghurt is unpasteurized. Although yoghurt is considered to be a dairy product, the fact that it has been "reprocessed" by the yoghurt bacteria into a more digestible form than milk makes it a far more preferable form of food.

## **Dietary fiber**

It has always been considered beneficial to eat foods containing "bulk". It was not thought essential, but desirable, as it helped elimination and prevented constipation.

Dietary fiber does not contribute directly to nourishment. Its function is to add volume and water to the fecal matter which not only ensures easy elimination, but reduces the entire transit time between eating and elimination to about one day instead of up to three which a traditional diet takes.

It was observed by Dr Denis Burkitt and by Dr Hugh Trowell who both spent 25 years working in Africa, that among natives living on the "rural African diet", almost entirely vegetarian and high in fiber, the following diseases were unknown: cancer of the bowel and rectum; diverticulosis, diverticulitis, constipation, hemorrhoids (piles); varicose veins; phlebitis (thrombophlebitis); appendicitis; hernia; hiatus hernia.

In the intestine, fiber absorbs about eight times its own volume of water and causes nearly 30% more bile (which is two-thirds cholesterol) to be excreted. Some researchers claim that a high fiber diet can reduce blood cholesterol by 22%. Other tests showed that fiber by itself has no effect. (Dr Thomas Raymond, University of Oregon, 1976). As a natural high fiber diet is low in fat, cholesterol, protein and refined carbohydrate, on such a diet a reduction in body cholesterol is inevitable anyhow. A low fat, low cholesterol, high fiber diet helps the liver maintain the correct level of the hormone estrogen which can be undesirably high on the Western diet. High levels of estrogen are associated with premature sexual development in girls, and breast cancer.

Fiber is found only in plant foods. It is a type of complex carbohydrate and contains cellulose, hemicellulose, lignin and pectin, which pass through the intestines without being broken down by the digestive enzymes. Fruit and vegetable fibers are not as coarse as cereal fiber, particularly if cooked, but are adequate for good elimination. Processed foods, which contain nourishment inversely proportional to the price, such as polished rice, most packaged cereals and instant potatoes, have most of the fiber removed. Stone-ground flour contains more fiber and Vitamin E than ordinary flour which is steel-roller ground. Even stoneground wholemeal bread is not high in fiber as the outer coating of the kernel of the grain is most lost in the milling.

## **Fruit (whole) vs fruit juice**

*(See Fruit, the natural food of primates)*

It is far better to eat fruit whole for two reasons. Firstly, advantage is derived from the fiber and secondly, the nourishment is absorbed naturally instead of in concentrated form. The composition of commercially produced fruit juice is always suspect anyway, and in the true sense cannot be regarded as fresh.

## **Onions and garlic**

Onions, tabasco and garlic contain some factor which tends to reduce the tendency of blood to clot. Dr Menon demonstrated this effect with onions, served cooked or raw, at the Royal Victoria Infirmary, Newcastle, England.

I have read where European farmers who keep their cows indoors during winter feed them onions. The cows' circulation, impaired by inactivity, is protected thereby from blood clotting. One entire book titled *Garlic* described the medicinal benefits of garlic as recorded by every civilization that ever left records.

Garlic juice has been demonstrated to be a potent antiseptic, and two studies published in the British Medical Journal, *Lancet* in 1973, showed that garlic could reduce blood sugar in diabetes patients and reduce cholesterol. Its action therefore must be to reduce fat levels in the blood somehow, because diabetes is caused by high blood fat levels. (See Platelet Adhesiveness Index, Chapter 10.)

Taken in large quantities, garlic can cause irritation to the digestive tract. Garlic contains allicin, which according to Japanese research findings, can destroy the membranes of red blood cells and inflame the gastrointestinal tract.

## **Health food restaurants**

These are usually run by well-meaning people intent on supplying their patrons with health-giving food. Unfortunately, most of their dishes are cooked and contain a high proportion of fat in the form of vegetable oils, nuts and cheese.

## **Health food stores**

Health food stores sell some of the food you need unprocessed and in bulk. On the other hand, they sell a lot of stuff loaded with fat and sugar such as "health" cookies and sweets, chocolate substitutes, processed dried fruits high in sugar, vegetable oils, whether cold-pressed or not, and a great assortment of nuts.

Some health enthusiasts spend a lot of money not only on vitamins but on food supplements such as lecithin, protein meal, protein powder, yeast, carob, ginseng, distilled water, and so on. There are salt substitutes which are sea salt mixed with vegetable powder.

Now while some foods are more nutritious than others, there is no such thing as "magic" food which can promote radiant health. Most ailing people are not under-nourished, and radiant health is possible for them by merely eliminating from their diet the type of foods that, throughout their life, have been polluting their blood.

## **Tea and coffee**

Tea and coffee contain caffeine as do cocoa, cola drinks and chocolate. These beverages cause stress to the nervous system, increase uric acid production and can lead to kidney damage. Researchers at Boston University Medical Center consider coffee intake to be associated with heart attack and cancer, as it increases blood clotting factors. Used with sugar these beverages are even more harmful.

Tea contains less caffeine than coffee but also contains tannin. The caffeine in tea dissolves quickly in boiling water but tannin takes longer. Tea is therefore less harmful if taken weak and poured soon after making and preferably with the addition of milk which renders the tannin innocuous.

The addiction to these drinks stems from the caffeine which is a stimulating drug. It should be pointed out that hot or cold drinks can damage the delicate membranes of the digestive tract. Very hot food or

drink can eventually permanently destroy many of the tiny villi of the intestine walls and so reduce digestive capability.

## **Beer**

Beer and other forms of alcohol are refined carbohydrates and therefore to a degree poisonous in the body. It has recently been shown after tests at Birmingham Hospital, England, that as little as three pints of mild ale per day was enough to maintain a level of blood fats and increased blood viscosity sufficient to greatly increase blood pressure, particularly in coronary prone patients. This increased blood viscosity was sufficient to significantly increase the risk of heart attack. The link between beer consumption and cancer already suggested by the report from a British

Regional Heart Study recently, in which it was found heavy beer drinkers had 30% more lead in their systems than teetotalers, is not surprising, particularly in view of the increased blood-fat effect.

## **Spices**

Many spices are irritants to the digestive tract and adversely affect the kidneys and liver if regularly consumed. Some are considered to be carcinogenic (cancer producing).

Dr J. R. Johnson, Nephrologist at Sydney's Royal Prince Alfred Hospital and Dr O. Holmes, a surgeon at Lautoka Hospital, Fiji, reported their study on Fijian Indians in the *Australian Medical Journal*. They postulated that "Curry Kidney" is akin to "Worcestershire Sauce Kidney" as described by researchers in England and Australia, and which promotes susceptibility to kidney stones.

Scientists at the University of Texas report that common seasonings such as cayenne pepper, paprika and particularly turmeric (the main ingredient in curry powder) can alter body cells permanently by disorganizing chromosomes.

## **Distilled water and mineral water**

Notwithstanding commercial sales talk, there is no evidence that mineral water or spring water is in any degree superior to the plain tap water available in most areas, except perhaps that it contains no fluoride or chlorine. On the other hand, there is strong evidence to the contrary in that some mineral waters contain undesirably high levels of sodium and other salts capable of causing eventual harm.

Distilled water, pure rainwater or the water in fruit and vegetables is desirable for normal body functions, and in addition, because it is capable of taking minerals into solution instead of depositing them, it is beneficial as a body cleanser. On a low protein, vegetarian diet, drinking water to allay thirst is hardly ever required.

## **Vitamins, enzymes and minerals**

Vitamins and enzymes are catalysts which enable body chemistry to function rapidly. (See Enzymes, Chapter 6.)

Vitamins derive their name because they are essential to life, but unlike enzymes, also essential, they cannot be manufactured from other chemicals within the body, they must be present in food. To make enzymes the body must be provided of course with the proper vitamins, minerals and amino acids.

Minerals are inert, and the body requires a wide range of them in its make-up. Apart from places here and there with soil deficiencies, adequate vitamins and minerals are to be found in natural food. Properly grown, organically grown foods could well be of higher quality than those grown with chemical fertilizers



but the latter sustain people satisfactorily.

Food suffers depletion in nutrient value when cooked, processed or refined. When a processed food is described as "enriched" it merely means that having been almost destroyed in food value, some synthetic vitamins or minerals have been added to the remnants. Nutritional value lessens as food goes stale; best nutrition is gained by consuming food fresh and uncooked. Speaking on the subject of cancer, and referring specifically to the efficiency of the immune system, Dr Herbert Boynton of San Diego said in 1979 that by merely substituting proper food in place of fat, refined carbohydrate and excess protein, micro-nutrient intake can be increased 300-400%. As such fabulous results using no supplementary vitamins or minerals at all can be achieved merely by the elimination of the most dangerous food substances, and as in various dirty and poverty-stricken areas in the world the children run and play, bright-eyed and with flashing white teeth, it is apparent that the main threat of malnutrition to the world stems from the increasing adoption of Western dietary habits. And as we do not intend in future to subsist on cornflakes, coco-pops, meat pies, hamburgers and so on, I shall not carry on at length about vitamins except to mention a few that are harder to get or more easily destroyed.

## **Vitamin E**

Blood fats, particularly polyunsaturated fats, become oxidized in the bloodstream and deplete blood oxygen. Vitamin E tends to prevent this process and many medical research doctors recommend large intakes of the vitamin because of the beneficial results they have observed.

Dr Wilfred Shute of Canada has propounded the therapeutic value of Vitamin E for over 30 years and has written several convincing books about it.

Drs Manfred Steiner and John Anatase in the *Journal of Clinical Investigation*, March 1976, describe how doses of Vitamin E up to a maximum of 1800 iu per day reduced blood platelet aggregation by 40-50%. This subject was discussed in Chapter 10.

Dr Alton Ochsner, a leading US surgeon, recommends the use of Vitamin E and no longer uses anti-coagulants. Professor Cureton of the University of Illinois long ago demonstrated improved oxygen utilization by using wheatgerm oil.

Dr Lotz in the *Medical Journal of Australia*, 11 June 1977, described the alleviation of leg cramps by using Vitamin E.

These doctors describe results successful to different degrees, having used dosages sometimes varying enormously. However, all that their patients needed was to have the condition of their blood corrected by proper diet. Once this was done, the modest levels of Vitamin E (and other vitamins) available in natural food becomes entirely adequate.

## **Vitamin C (ascorbic acid)**

Vitamin C is probably the most talked about of all the vitamins, and probably the most critical in the lives of civilized people. Like Vitamin E, it is important to the oxygen-carrying capacity of the blood, acts as a detoxifier of poisonous substances, and is essential to the integrity of the Protein substance, Collagen, which supports and holds together the cells of the various tissues. Vitamin C is essential to the function of the brain and nervous system and is needed in greatly increased amounts in conditions of any kind of stress, including illness.

It has been shown that a deficiency of Vitamin C renders the body more prone to atherosclerosis, cancer and all other metabolic diseases. Two of the obvious factors relating Vitamin C deficiency to atherosclerosis and cancer are the diminished integrity of the tissues of artery walls and other organs, in addition to diminished oxygen utilization in the body. Vitamin C neutralizes sodium nitrate and sodium nitrite contained in some kinds of processed meats, which chemicals have been shown to be potent

carcinogens (cancer-causing agents). Vitamin C also facilitates the absorption of various essential minerals.

It is interesting that ascorbic acid is not a vitamin for most animals, because their bodies have the capacity to constantly manufacture it in varying amounts according to their current needs. Humans and the other primates, guinea pigs and certain fruit-eating bats, lack this capability and must rely on their diet for Vitamin C. Thus, in our "civilized" environment, and deprived of the Vitamin C-rich tropical fruits available to the more primitive primates (living instead on supermarket foods and cold-storage fruit and vegetables), it becomes apparent most people must be deficient in Vitamin C all the time, and it is doubtful whether and to what extent this deficiency can be made up by taking artificial supplements.

Vitamin C in food is perishable and becomes destroyed in long cold storage or when food is cooked, and to make things harder, it cannot be stored in the body, so must be always available in the diet.

There has been a great deal of confusion about the requirements for Vitamin C, much of it stemming from experiments aimed at the elimination of scurvy, whereby it was demonstrated that very small amounts only were needed to reverse or prevent the disease. Upon these findings it was concluded that only small amounts are needed for good health, and the authorities laid down the minimum daily requirement at only 60 mg.

In the light of what is now known of other body functions, it is clear that far greater amounts are required and that most people are suffering (albeit in apparent good health) a sub-clinical deficiency leading eventually to premature degeneration.

Comparing the amounts of Vitamin C found in the body tissues and blood of various animals, many researchers have concluded that adult humans require ideally up to 10,000 mg per day and when under stress perhaps even more. Their arguments are supported by quoting cases of dramatic improvements in very sick people who have been administered, sometimes by injection, large amounts of synthetic Vitamin C.

The writer once attempted to figure out the proper intake of Vitamin C for an adult on the basis of that contained in human milk, assuming that the milk of a well-nourished mother would contain optimal amounts. The information available varied widely. The British publication *The Composition of Foods* (H.M. Stationery Office) gives the Vitamin C content of human milk as only 3.7 mg per 100 gms, but this would appear a minimal amount. According to Dr Archie Kalokerinos, a world authority, much higher levels are desirable. He says: "If a nursing mother is deficient in Vitamin C her breast milk will be deficient. If the mother has plenty of Vitamin C then her breast milk will contain plenty. However, after a certain level (about 20 mg per 100 g of milk) is reached, further increases in intake by the mother does not result in a proportional increase in the breast milk".

If it can be assumed that this latter figure is ideal, and if a baby's requirements are any indication of an adult's requirements, then it can be calculated that an adult diet of 2,070 calories should contain 600 mg of Vitamin C. However, this argument does not hold in the light of the fact I discovered, that a baby's requirements for Vitamin C are minimal because the physical activity of a young baby and the stress levels to which it may be subjected are minimal anyway and therefore not a good indication at all.

Whilst the official requirement for adults has been laid down by the US Food and Nutrition Board at 60 mg per day, it is interesting that the "Nutritional Requirements of Laboratory Animals" (National Academy of Science Committee on Animal Nutrition) recommends for monkeys 55 mg of ascorbic acid per kilogram of body weight per day, which equates to 3830 mg for the average adult human. The publication gives two diets for guinea pigs, one which allows a guinea pig 12.5 mg per day and another which gives 50 mg per day. Using a weight of 300 g for a guinea pig and 70 kg for a human adult, these amounts equate to 2,900 mg and 11,700 mg for adult humans.

Dr Geoffrey Bourne, of the Yerkes Regional Primate Research Center in Atlanta, stated that an adult gorilla in the wild consumes about 4,500 mg of ascorbic acid a day, and Dr Linus Pauling, probably the most informed person on the subject in the world, having taken all these arguments into consideration,

concluded the optimal daily intake for human adults to be in the range between 2,300 mg and 9,000 mg, depending on levels of activity and stress.

Dr Pauling tested the amount of Vitamin C contained in over one hundred natural plant foods and deduced that a 2,500 calorie diet of an average cross-section of these foods would provide 2,300 mg of Vitamin C. If the foods richest in Vitamin C were chosen, then 9,400 mg would be provided.

Thus it can be seen that whereas the other vitamins don't present much of a problem, how do you know whether your diet is adequate in Vitamin C? How do you know if an orange was properly grown or how old it is? In fact comparison tables show that even good oranges don't contain great amounts of Vitamin C. Certain tropical fruits such as Acerola cherries, Peruvian camu camu and guavas, may contain up to 30 times more Vitamin C than good oranges, whereas pineapples, mangoes and bananas contain relatively little. From the foods available in temperate climates the best sources of Vitamin C are leafy green vegetables, tomatoes, berries, peppers, strawberries, cauliflower and citrus fruits, preferably, of course, eaten raw.

It is significant that the tropical fruits as a rule contain the highest levels of Vitamin C and that in temperate climates the summer fruits such as blackcurrants, gooseberries, strawberries, raspberries and tomatoes are the best available sources. Potatoes contain a little, but if sufficient of them are consumed, reasonable amounts of the vitamin are available. Cherries, plums, grapes, pears, apples, carrots, lettuce and celery contain very little Vitamin C.

Supplementary Vitamin C. It would seem advisable, unless extreme care is taken in selecting food, that benefit would be gained by people in temperate to cold climates in taking supplementary ascorbic acid. Always remember however, that in Nature all nutrients are accompanied by many others, such as the bioflavonoids, and that any artificial food substance can be regarded, at best, as second-rate.

Incidentally, Irwin Stone, who felt that synthetic Vitamin C was superior (there is no doubt he observed it achieve much good), and who took large amounts of it for many years, died recently, aged 75, of a heart attack. He had always indulged in the Western diet, claiming that Vitamin C fully protected him. Like Dr Wilfred Shute, who placed similar reliance on the protective powers of Vitamin E, he paid the standard price for his ignorance of Nature's eternal laws.

## **Vitamin B12**

Herbivorous animals produce Vitamin B12 in their bodies and it is commonly thought that the human diet should include at least a little animal protein to supply this vitamin. Only minute amounts (one millionth of one gram per day) are required, and normal body stores are adequate for at least five years. It appears that Vitamin B12 can be synthesized in the human digestive tract as in other animals, but one way or another there is ample evidence that pure vegetarians maintain normal levels and good health indefinitely on a diet apparently devoid of Vitamin B12.

Dr Richard Bagen (USA) in his book *The Vegetarian's Self-Defense Manual* (1979) says: "After careful review of all the literature often quoted as demonstrating 'pure' vegetarians often suffer Vitamin B12 deficiency because of inadequate dietary intake, not one solitary case was found wherein a vegan consuming an adequate, purely plant food diet suffered any ill health due to Vitamin B12 deficiency or any other deficiency. This finding contradicts the statements made in virtually every textbook of medicine and nutrition I've ever come across".

Pernicious anemia can afflict meat-eaters as well as vegetarians and the disease may be corrected by Vitamin B12 injections. Thus it is shown that the anemia is caused not by lack of B12 in the diet, but by the body's inability to utilize it, the problem sometimes arising from deficiencies of other nutrients such as folacin, iron and Vitamin B6.

## **Vitamin supplements and megavitamin therapy**

Similar observations can be made of other vitamins and minerals. Obviously if a person's diet is deficient in them, he will benefit by proper amounts taken supplementarily. A friend of mine swears by the efficacy of large doses of B complex vitamins taken before, during and after a big night out to replace those destroyed by alcohol. All refined carbohydrates use body stores of Vitamin B1 (thiamine) and many people are doubtless deficient in it a lot of the time with consequent thyroid malfunction.

It is recognized that there probably are many vital foods factors still to be identified, and that in order to ensure we are not deprived of them, it is advisable to consume natural foods preferably uncooked and unprocessed.

Administering large doses of vitamins in excess of normal requirements in an effort to improve a sick person's condition is called "megavitamin therapy".

The book *Supernutrition* by Richard Passwater insists that large doses of certain vitamins and minerals will lead to optimum levels of body chemistry. I don't doubt that they sometimes help, but there is evidence that in some cases some supplements cause actual harm in the body.

Selling synthetic vitamins is profitable and is big business, and it is very dubious whether the consumer in most cases achieves anything other than processing very expensive urine. *Choice* magazine in Australia reported in May 1984 that most vitamin preparations available were extremely overpriced and many consisted of between 50% and 71 % sugar. They were colored with artificial chemicals and some contained undesirable levels of sodium.

Optimum levels of body chemistry can be achieved only by first eliminating poisoning factors from the diet. Vitamins by the cartload cannot rectify the condition of "lipotoxemia". So in all cases the remedy is to clear the toxic condition of the blood and permit the body chemistry to return to normal of its own accord, nourished by a wholesome natural diet.

## **Supplementary enzymes**

All natural foods contain enzymes in quantities proportional to the calorific content of the food. Although the enzymes exist for other natural purposes, when an organic substance is consumed as food, its enzymes become available to assist in its digestion. However, as most of the food eaten by humans has been cooked, the digestive process must rely almost entirely on enzymes produced by the body.

People with defective digestion due to pancreatic deficiency can achieve normal digestion by taking suitable supplementary enzymes in tablet form. In fact it is highly probable that people who eat most of their food cooked would also benefit greatly by taking supplementary enzymes with their meals.

## **Herbs and herbal extracts**

There are literally hundreds of herbs which are claimed to be health-giving when used in addition to ordinary foods. Many books have been written on this subject, indeed entire books have been devoted to acclaiming the properties of just one single herb. A sort of cult of "herb worshippers" exists similar to the cult of vitamin worshippers.

I am not opposed to people using supplementary vitamins and herbal extracts, because these products seem to do no harm, and in many cases appear to do good. Sometimes as with medicine, the good influence may be achieved by the placebo effect, i.e. via mental pathways.

There is no doubt however, that herbs such as aloe vera, ginseng and so on, can help to purify or "de-fat" the bloodstream and improve circulation and general metabolism, thereby achieving in some cases a diminution of some disease symptoms. A study by J. B. Michaelson PhD, of the Applied Biological Sciences Laboratory, using rabbits fed on very high fat diets showed that when 2% Tienchi Ginseng was added to the diet of one group, the rabbits remained slender with clear arteries, Whereas the other group

became obese, with arteries clogged with fat deposits.

It is obviously a far better idea, however, to shun a diet high in fat and cholesterol in the first place.

## **Fad diets**

There are grape diets, macrobiotic diets based on brown rice, raw vegetable diets, fruit diets, juice diets, high fiber diets etc., each proclaimed to rapidly restore vital health. And they do, inasmuch as they all eliminate most of the substances which have been causing the harm. This allows the bloodstream to clear and carry oxygen better. They also allow the body to free itself of poisons.

There is no "magical" nutrient in grapes or in brown rice or anything else. Some extreme diets could, if maintained, lead to deficiencies--they are in fact what could be called partial fasting.

## **Fasting**

Fasting has been known for hundreds of years to enable an ailing body to rapidly return itself to health. It is perfectly safe except for people suffering from nutritional deficiencies.

A fast can be one day long or vary, according to the requirement, to over one hundred days. A long fast must be carefully conducted by an experienced naturopath as complex changes in body chemistry must be monitored. The principle of fasting is that the body is relieved of the effort of digesting foods, harmful substances are excluded from the body, and the body detoxifies itself by consuming, for fuel, fat and various noxious substances stored in the tissues. At the same time toxins are eliminated through the urine, breath and perspiration, the evidence of which becomes apparent in the form of severe body odor. Weight loss is obviously achieved by fasting and if the fast is extended, some lean body tissue (protein) will be lost as well as fat, because when carbohydrate stores are gone, protein is used by the body to make glucose. However, the loss of protein is not severe because after a few days the brain and nervous system adapt to using ketone substances, derived from fat, for the major proportion of their energy needs. Only when the body's fat reserves are gone does emaciation of lean tissue occur.

## **Special diets**

Special diets can generally be considered to be in two classes, those to eliminate illness and promote health, and those designed for the purpose of slimming. A properly designed diet will cover both requirements automatically. The reason "traditional" health diets, evolved from traditional concepts such as taught by Adelle Davis, Lelord Kordel, Gayelord Hauser and others, fail in both requirements, is that they are wrongly composed, containing too much protein and fat, and do not satisfy the appetite in time to prevent the tendency to overeat. The weight-reducing diets based on high protein, high cholesterol food, such as the Atkins diet, Scarsdale diet and Stillman diet, may cause outright harm; they achieve weight loss but they cause dehydration and loss of muscle tissue as well as stress on all vital organs.

People can be indefinitely sustained even on synthetic chemical diets. Intravenous glucose is commonly used in hospitals but can provide only 600 calories per day. People with seriously impaired digestive organs can be maintained in good health on a synthetic liquid mixture of nutrients constantly fed into their veins by a small portable pump. The long-term effects of such a diet are not known.

The value of any dietary regime can only be assessed over a long period, perhaps even a lifetime, because a special diet which may effect great initial benefit may end up causing long-term degeneration. Any diet at all which drastically reduces fat intake will produce impressive improvements initially just by unsticking the blood, as of course, does fasting. Over a hundred years ago, Dr J.H. Salisbury of New York achieved fame in the USA and Europe because of his success in achieving cures for all kinds of illnesses by dietary means. The Salisbury regimen consisted simply of four pints of hot water taken daily and a diet of plain ground beef. The minced meat was taken in three meals spaced five hours apart, each one

preceded one hour beforehand by a pint of hot water with the last pint before retiring at night. The meat was dry broiled or boiled in water to remove the fat. The patients all suffered a constant craving for something sweet but rapidly improved in health. The immediate benefit of this diet obviously came about by the reduction of fat in the blood and the curtailment of total food intake. However, after a time these benefits would be offset by malnutrition in other areas.

The popular Weight Watchers diet is an improvement on the conventional Western diet but is not recommended because it still permits too much protein, as well as fats, oil, mayonnaise, cheese, eggs, salt and pepper.

Of the various popular diets, the three best known for their health promoting effects are the macrobiotic diet, the Pritikin diet and the Gerson diet. These diets have good track records, their claims having been substantiated by many medical case histories and testimonials. The macrobiotic diet, based on brown rice, contains too much cooked food and salt and insufficient fruit to achieve the best long-term results. The Pritikin diet is better, but because the Pritikin guidelines are fairly flexible, it is possible for two people, both keeping within the guidelines to experience different results. This can happen because individual food preferences may lead one to consume a preponderance of cereal food and cooked vegetables whereas the other may favor raw salads and fruit, the latter course being much more preferable. For instance within the Pritikin guidelines better circulation is achieved simply by the drastic reduction of fat, but an excessive intake of grain products may at the same time exacerbate arthritis and eventually result in cancer. If the diet is based on raw fruit and vegetables this danger is not presented.

The Gerson diet (see Chapter 20) is more to be recommended: it is a very strict regimen having been designed for cancer patients in view of their precarious state of body chemistry.

To repeat, the main objections to the Pritikin diet and the macrobiotic diet is their preponderance of grain products, the effect of which is to unbalance body chemistry, and introduce new problems and exacerbate others.

Remember, the object of all this enquiry is not just to took good on the beach while we are young, not just to avoid a heart attack or cancer in middle age, but to extend a happy and vigorous life far into the future.

## **The value of raw food**

There is no doubt that the cooking of food is an unnatural process invented by man comparatively recently in his evolutionary development. Although cooking may render certain foods, such as cereals, more readily assimilable to human digestion, and render some foods more palatable, generally it is a destructive process which seriously depletes the nutritive value of food.

Dr Herbert Shelton, referred to earlier, in his book *Superior Nutrition*, said: "Cooking destroys in part, if not wholly, the oxidizable factors of foods. This simply means that cooking 'bums' those portions of foods that the body ordinarily oxidizes. Once these substances have been oxidized, they cannot again be oxidized in the body, hence they are useless as food. Heat, by speeding up oxidization, turns food into ashes before it is eaten. For example, certain of the amino acids, lysine and glutamine are destroyed by the cooking process. The losses that are produced by cooking may not result in serious trouble until later in life and all of their effects do not show up for two or three generations".

Consider the following points:

1. When the nutritive value of food is decreased, more food must be eaten to achieve satisfaction of the appetite, and because the culinary art of cooking is designed to artificially stimulate the appetite, over-eating naturally follows.
2. All foods, particularly if cooked, to a greater or lesser extent introduce toxic substances into the body, which must be eliminated. Some toxins come directly from the food when digested and others are formed as by-products of the body metabolism. The more food eaten, the more toxins are

produced, and the faster will be the degeneration of the body's vital organs.

3. Apart from wear and tear on the vital organs, toxins and mineral wastes above the capacity of the body to eliminate, gradually accumulate in the arteries and other body tissues. This process is greatest when cooked food is eaten, and least with raw food.
4. Natural enzymes in fresh food are destroyed at temperatures above 48°C (118°F). While some authorities argue that this does not matter because enzymes are destroyed anyhow by the acid in the stomach, there is much evidence to prove that not only do food enzymes achieve a significant degree of pre-digestion of food in the upper part of the stomach before being neutralized by stomach acid, but also sufficient enzymes survive to reach the intestine and are absorbed for use in the body.
5. When food or drink is heated above about 82°C (180°F) a further damaging effect occurs which increases in severity with the degree of heat. When the cooled food is eaten, the body suffers a pathological challenge which is indicated by a sudden increase in the white cells in the blood, known as leucocytosis. Some highly processed meats for instance, may cause a white cell increase of 300%.

Although the reasons were not understood, the harmful effects of cooked food have long been known. In 1829, Vincent Priessnitz of Silesia described the "inflamed and brittle" flesh of a pig which had been fed on cooked food all its life and compared it with the "firm and healthy" flesh of pigs fed on raw food. A diet of raw fruit and vegetables formed the basis of treatment at Louis Kuhne's celebrated clinic in Leipzig, Germany, 100 years ago, and has ever since been the basis of treatment in the many other famed sanatoriums of the world.

The importance of enzymes in food is not only that a load is taken off the pancreas, but possibly more important, the food is more completely broken down before assimilation from the intestine, so improving the entire metabolic processes within the body. The observations of researchers, J. M. Rabinowitch, J. A. Urquhart and others, described in the paper, *Lipase versus Cholesterol* (1983) by Dr Howell, demonstrate this fact.

The value of enzymes in raw fruit and vegetables is well known, but just as important are the enzymes in foods of animal origin. Animal protein, raw, contains the proteolytic enzyme cathepsin, and animal fat, raw, contains adipose lipase. All these food enzymes work to pre-digest their particular food component in the upper (cardiac) section of the stomach before being inactivated by the acid in the lower stomach. The research shows that the resultant more thorough breakdown of these foods in the intestine enables the body to more efficiently metabolize the protein, fat and cholesterol, thereby reducing the tendency to atherosclerosis.

It is preferable that food should be eaten at about body temperature; if food is eaten cold, digestive action cannot proceed until the food has been warmed in the stomach. Hot food can damage cells lining the digestive tract.

If raw food is allowed to "ripen" before eating, such as when meat is hung for several days, it becomes actually partially pre-digested by its own enzymes. In 1935, Dr Urquhart, in the *Canadian Medical Association Journal*, described how Eskimos did not cut up caribou meat until the animal had been dead for a few days. Similarly, freshly caught fish were buried to be later eaten uncooked in a partly decomposed state. The Eskimos gained a health benefit from this practice, said Dr Urquhart who described from his own experience how hard-working sled dogs could maintain top condition on such food whereas on a diet of fresh fish they weakened and lost weight after two weeks.

Further evidence that natural enzymes in uncooked food play a significant part in the digestive process is the fact that herbivorous animals although requiring large quantities of digestive enzymes, have very little in their saliva and have a pancreas of less than half the size compared with their body weight, than humans, who eat mainly cooked food. This shows that the digestive enzymes required by the animals must be furnished mainly by their food.

Allowing for differences in anatomy and so on, that this comparison is still valid is indicated by the fact that hypertrophy of the pancreas of animals occurs when the diet is changed to heat-denatured, enzyme-deficient food. Experiments by Dr Jackson, Department of Anatomy, University of Minnesota, showed

that on such a diet, otherwise properly balanced, in a period of 155 days the pancreas and submaxillary glands of rats increased in weight by 20-30%, while the pituitary and suprarenals decreased in weight.

Accompanying the enlargement of the pancreas brought about in the digestion of cooked food are changes in the gonads, adrenals, pituitary and other ductless glands. A study of people killed accidentally showed that all those over fifty had a defective pituitary gland, the master gland of the body.

As already mentioned, the destruction of enzymes is not the only harm caused by heating food. Japanese experiments with baby mice showed that when fed milk which had previously been heated, the mice did not survive. Using milk previously heated to 80°C (176°F) for half an hour, mice survived only three weeks. The higher the temperature to which the milk was heated the shorter was the survival time--120°C (248°F) caused death in one week, and 140°C (284°F) caused death in three to five days. The famous Pottenger experiment (see Milk, this chapter) throws further light on this subject in view of the fact that raw meat was included in the cats' diet. The most significant fact revealed by this experiment, apart from the lethal effects on the experimental cats, was that the excrement of these cats was poisonous to the ground, rendering it sterile and unsupportive of plant life, whereas in the pens of the healthy cats the ground was fertilized and supported flourishing vegetation.

Possibly the best examples of the harmful effects of cooked food are the studies of animals in the Philadelphia Zoo by Dr H. Fox, described in his book *Disease in Captive Wild Animals and Birds* (1923). For many years the mortality of animals kept in captivity was very high and attempts to breed them were not very successful. When it was realized that it was false economy to feed animals cheap food such as restaurant scraps etc, and their diets were changed to natural raw foods, straight away the animals' health improved and the mortality rate dropped to very low levels, while at the same time the animals began to breed normally.

It was mentioned earlier that Vilhjalmur Stephansson adopted an all-meat diet with disastrous results, all the worse because of consuming the meat cooked. A more recent study of Angmagsalik Eskimos, a community of about 1,000 on the east coast of Greenland, showed an average life span of only 27.5 years, mainly due to premature degeneration of adults. Their diet consisted of 95% flesh food. The study was by Hoygaard and Pedersen, Copenhagen 1941. This short life span appears to be worse than in the earlier reports on Eskimos elsewhere, and the writer speculates whether the Angmagsalik Eskimos had adopted the practice of cooking their food.

There is an association between the cooking and processing of food and the incidence of cancer, and conversely, it is a fact that cancer patients make the best recoveries on completely raw vegetarian food. In some cases, the reversion to even a partly cooked diet allowed the cancer to reappear.

This shows that when vital organs are at their lowest state of function, only raw foods make it possible for them to provide the proper body chemistry to maintain health. It follows then, that if raw food permits an otherwise ruined body to restore itself to health, so must raw food provide the maximum benefit to anybody--sick or well.

Dr Max Garten in his book *The Health Secrets of a Naturopathic Doctor* (1967) described how his health had not much improved by becoming a vegetarian, and how this led him to try a completely raw food regimen. He said: "The results were electrifying; within a few days I felt much stronger with a return of my former enthusiasm. Many of my patients whom I had been able to convert to this new diet also reported similar results". Dr Garten observed that putrefactive bacteria in the colon increased not only with the eating of meat but also with the degree of heat used in cooking all food, and with this increase so also did the odiferousness of the stool increase along with the appearance of aches and pains. He said: "It could only be deduced that certain agents in the diet were either missing or had been altered by the heat.

"The respective protein content of the vegetarian diet had also been found to be indicative of changes in the intestinal flora, legumes such as beans, lentils, peas etc. equally contributing to the display of putrefactive changes."

Thus, although vegetarians usually are healthier and outlive meat-eaters, they may not maintain very



good health or live to a very advanced age if they continually cook their food.

## **Raw fruit, the natural food of primates**

People become vegetarians to improve their health and extend their lives. Some vegetarians go a step further and consume their food mainly uncooked, while others go even further and limit their diet to fruit, which they claim to be the natural food of man.

Their argument is sound for a number of reasons, but one way or the other, it is a fact that, in reasonable variation, fruit can provide the full complement of all required nutrients in adequate quantities, remembering that the requirements for protein and fat are much lower than generally believed. Therefore, instead of being considered merely an accessory to conventional meals, fruit should be considered in its own right as a staple food. The advantages of a fruitarian diet are:

1. It provides complete nourishment with the minimum of extraneous substances capable of "sitting" up the tissues.
2. It is most easily digested, minimizing the energy required for digestion (which is substantial) thereby minimizing total food (calorie) requirements.
3. It is palatable.
4. It is easily obtained and easily prepared.
5. It satisfies the appetite when sufficient has been eaten--fruitarians are always lean.
6. Minimum but adequate protein is provided,
7. Minimum but adequate essential fats are provided.
8. Maximum energy is available from what is eaten, with only carbon dioxide and water, which are entirely non-toxic, as the byproducts.
9. It provides the body with adequate amounts of pure water.
10. It results in a favorable alkaline internal state.
11. Favorable intestinal flora predominate in the bowel.
12. No constipation occurs.
13. No auto-intoxication occurs.
14. The body de-toxifies itself.
15. The blood is clean and low viscosity, there is good circulation with low blood pressure.
16. There is the least wear and tear and the least "silting up" of all the body organs and tissues.
17. It is less expensive than a diet based on animal protein.

That it is the only single food substance which alone can sustain human life, even without drinking water, indicates that fruit is indeed man's natural food. Further substantiation of this view is that there are about forty distinct anatomical, physiological and biological features of humans which show unquestionably that the human body is designed mainly for a fruit diet, notwithstanding the fact that, like all animals, they can survive less successfully on a wide variety of foods. These features range from natural fondness for sweet foods, jaw and teeth structure, salivary secretion, length of digestive tract, size of pancreas, stereo color vision and so on. In fact in all these respects, humans are practically identical today with the more primitive primates in the wild which, whenever possible, live on fruit.

Evidence of the suitability of fruit as a staple food and not just as an accessory to the conventional diet is to be seen by observing fruitarians who live entirely on a wide variety of fresh fruit, and who display lean, youthful bodies, low blood pressure, clear vision and unimpaired faculties, even with advancing years.

A well-known human peculiarity never before connected with this argument but which provides almost conclusive evidence, is that humans, like all primates, are incapable of making Vitamin C in their bodies whereas other animals can (excepting guinea pigs and fruit-eating bats). Basing their argument on this fact, it is strongly advocated by many authorities that people should take large amounts of supplementary Vitamin C to compensate for this "error of Nature" which they put down to an unfavorable mutation in our evolutionary past some millions of years ago. To prove this argument completely wrong, and at the same time prove that man is a natural fruit-eater, consider:

1. The only mutations which persist to become a universal feature of a species are favorable ones. Unfavorable mutations can not possibly do so.
2. A genetic change preventing the synthesis of Vitamin C in the body, to become universal to an entire species, must therefore have been, at the time, a favorable change.
3. The only possibility of such a genetic change being favorable is for the species to have been already getting more than adequate Vitamin C, and that any more was undesirable.
4. The only source of "excess" Vitamin C in Nature is a diet of raw fruit. (Only certain tropical fruits contain such high levels of Vitamin C; many fruits contain only small amounts.)

Therefore it is clear that the human diet ideally, should be based mainly on fresh fruit, and that past errors which have led to widespread Vitamin C deficiencies are dietary--not genetic--errors.

Obviously some fruits are more nutritious than others, and quality will vary according to the quality of the soil in which they are grown. Commercially grown fruit may contain various levels of insecticide poisons, in which case the fruit should be carefully washed or peeled. At the time of this fifth edition, the author has subsisted almost entirely on commercially grown fruit for 15 years, all the while working long hours seven days a week, and has maintained excellent health. I have chosen the fruit at random with a preference for tropical fruits, and included dried fruits from time to time without any attempt at being scientific about it. It is claimed by some people that such a diet will eventuate in high blood triglycerides and this is why Nathan Pritikin limited fruit. The increase in triglycerides is supposed to follow elevated levels of blood sugar after eating fruit, but this does not occur with eating raw fruit, particularly eaten at whim throughout the day rather than in three large meals. An objection to acid fruits such as citrus and pineapples, particularly if unripe, is that eaten in excess, the acid may cause erosion in the enamel of the teeth. It is interesting to note here that with good body chemistry and a clean mouth, teeth, like bones, are self repairable. With half my teeth jammed with fillings, maybe they are beyond self repair, but at my regular pilot medical check-ups, I enjoy being told by my doctor I have the arteries and blood pressure of a schoolboy. That makes fruit taste better still, even on a winter's day.

A convert to fruitarianism was the Indian philosopher and statesman Mahatma Gandhi, who after experiencing poor health throughout his youth became a student of nature cure at the age of 32. First he became a vegetarian and then a fruitarian. After six months as a fruitarian, he said (quoted from his book *The Health Guide*):

"A period of six months is all too short to arrive at any definite conclusions on such a vital matter as a complete change of diet. This, however, I can say, that, during this period, I have been able to keep well where others have been attacked by disease, and my physical as well as mental powers are now greater than before. I may not be able to lift heavy loads, but I can do hard labor for a much longer time without fatigue. I can also do more mental work, and with better persistence and resoluteness. I have tried a fruit diet on many sickly people, invariably with great advantage. My own experience, as well as my study of the subject, has confirmed me in the conviction that a fruit diet is the best one for us."

An interesting personality is champion weightlifter, Wiley Brooks, of Venice, California. Most unconventional, Wiley, 6 feet tall and weighing 135 lbs, at age 45 could, from a squat rack, lift 935 lbs. He eats only raw fruit and fruit juice.

Dr de Lacy Evans, who devoted most of his professional life to the study of patients, populations, and the factors involved in the aging process, said of fruit:

"There is, therefore, a simplicity, a reason, a wonderful philosophy in the first command given to man--Man may live entirely upon fruits in better health than the majority of mankind now enjoy. Good, sound, ripe fruits are never the cause of disease, but the vegetable acids, as we have before stated, lower the temperature of the body., decrease the process of combustion or oxidation--therefore the waste of the system--less sleep is required, activity is increased, fatigue or thirst is hardly experienced: still the body is well nourished, and as a comparatively small quantity of earthy salts are taken into the system, the cause of old age is in some degree removed, the effect is delayed, and life is prolonged to a period far beyond our 'threescore and ten'."

## **Frequency of meals**

Apart from the sort of food that you eat, the way in which it is eaten is a health factor in itself.

When food is consumed more frequently but in smaller amounts ie. frequent snacks instead of three full meals, the level of blood sugar (glucose) remains steady. If the same amount of food is eaten in large amounts widely spaced, the blood sugar may rise too much after eating each meal resulting in an increase in triglycerides and possibly a degree of hypoglycemia as the sugar level subsequently slumps.

At the Longevity Center, small main meals are served interspersed with four snacks throughout the day. The snacks are perhaps soup, fruit, salad or a baked potato.

Experiments by Dr Grant Gwinup, University of California, Irvine, and by Dr Pavel Fabry of Prague, Czechoslovakia, with human subjects, and by Dr Clarence Cohn at the Michael Reese Hospital in Chicago with animals, demonstrated that spreading food intake by frequent snacks throughout the day caused lower cholesterol and triglyceride levels than when the same food was taken in three meals. When taken in one large meal a day, cholesterol and triglyceride levels increased. Dr Fabry, whose study covered 1,133 men aged 60-64, provided data showing that those men eating three meals or less per day had a significantly higher incidence of CVD symptoms than those eating the same rations in five or more meals.

## **Pregnant women and growing children**

Everybody agrees that pregnant women and growing children should be properly nourished even if no one else is. Advice abounds on how this should be accomplished, and for some reason or other the various "authorities" say that extra protein is needed, milk should be guzzled to get calcium, and so on. "If such special measures are not necessary," the question is asked by concerned mothers, "will a simple natural vegetarian diet provide adequate nutrition?" And the answer is: of course it will. A diet which enables a feeble invalid to heal ulcers, strengthen porous bones, build new muscle, repair lung tissue and then go running for miles outdoors is certainly adequate for pregnant or nursing mothers, and has been demonstrated to produce optimum health and growth in children once they are weaned, which should never be in less than a year.

## **Food allergies**

As the importance of nutritional factors in health and disease becomes more and more apparent, there is a tendency to disregard the basic fundamentals of balanced nutrition and to go searching for "super nutritional" substances or "missing" vitamins and minerals to overcome the inadequacy of the conventional diet. A new branch of medicine known as orthomolecular medicine concentrates on this aspect but at the same time tries to ascertain if a specific substance or substances in the patient's diet may be causing illness. If a person constantly reacts unfavorably to a dietary substance they are said to be allergic to it. Proper correction of the diet automatically eliminates many allergies because the most common allergies are foods which should be avoided by everybody anyway.

The symptoms of food allergy are caused by certain incompletely digested food substances entering the bloodstream or lymph from the intestine and causing chemical reactions in the body. Such entry of undigested food particles into the circulation is possible in normal people without causing an allergic reaction because enzymes in the blood serum complete the breakdown of the food, or it will be digested by the body's white cells.

The most common allergies occur because of a confused response by the white cells due to a built-in immune system defect originating from wrong feeding as an infant. Nature intended infants to be breast-fed. A baby's digestive system cannot properly cope with any other kinds of food; not only does mother's milk provide perfect nutrition for the child, it provides immunological substances to protect against infection until the child's own immune system is completely developed. Foods other than mother's milk

fed to the child in infancy not only cause digestive upsets, but the entry of undigested food into the bloodstream confuses the complicated programming of the still developing immune system. Allergies have been traced back even to substances eaten by the mother in pregnancy. Such an allergy may appear at first sight to be inherited, but is not. Food allergies are most common in young children who in many cases outgrow them after the age of five years.

Allergic reactions occur more readily when the health is indifferent or in chronic illness when enzyme levels and general metabolism are low. Quoting from the book *The Status of Food Enzymes in Digestion and Metabolism* by Dr Edward Howell: "Oelgoetz believes that the presence of a proper level of serum enzymes is an effective protection against food allergy occasioned by absorption of whole proteins, and that a low serum enzymes level induces allergy. According to the experience of Oelgoetz and associates, when doses of pancreatic enzymes larger than the official doses are administered to patients having symptoms of allergy accompanied by a low serum enzymes level, the serum enzymes level returns to normal and the symptoms of allergy subside".

Dr Rob Krakovitz, MD, of Marina del Rey, California, says that to treat allergies naturally it is necessary to improve digestion, and advises patients:

1. Eat only when hungry.
2. Do not eat when tired, under stress, or sick.
3. Eat in a tranquil atmosphere.
4. Eat slowly and chew foods well.
5. Eat smaller, more frequent meals.
6. Don't drink with meals.

This advice of course revolves around obtaining the most favorable enzyme activity in the digestive tract.

It is significant that the foods found to be most commonly causative of allergies are cow's milk, wheat, corn and eggs, which foods in one form or another are often fed to babies upon weaning. Whether your digestive system can handle them or not, these substances are not desirable in the diet anyway.

It should be noted too that the Cytotoxic Food Test now in common use for testing food allergies has been found to give inconsistent results and a large number of false-positive reactions (Leiberman et al, *JAMA* February 17, 1975).

## Food for thought

Sponsored by the National Geographic, Dr Alexander Leaf visited the three localities in the world renowned for the health, vigor and longevity of the people--Vilcabamba, Hunza and the Caucasus. The trip was written up in the January 1973 edition. Later Dr Leaf wrote the book *Youth in Old Age* and in the book quoted these figures:

Average daily intake	Calories (g)	Fats (g)	Proteins (g)	Carbohydrates
Americans--all ages	3,300	157	100	380 (mostly refined)
Hunza--adult males	1,923	36	50	354 (complex)
Vilcabamba--elderly	1,200	16	38	230 (complex)
Caucasus--over 80	1,800	50	80	N/A

These different diets are shown in the next table with the constituents as percentages of the total calories. Other diets are shown as well. The Australian diet is similar to the American.

Average daily intake	Fat	Proteins	Carbohydrate
American--all ages	40-45%	15-20%	40-45% (mostly refined)
Hunza--adult males	17%	10%	73% (unrefined)
Vilcabamba--elderly	12%	12%	76% (unrefined)
Caucasus--over 80	25%	18%	57% (unrefined)

PNG West Highlands	3%	3%	94% (unrefined)
Pritikin Longevity Center	5-10%	10-15%	60% (unrefined)
World Health Organization recommendation	20%	20-30%	50-60% (not defined)
US Senate Select Committee recommendation	30%	10-15%	55-60% (15% refined)
American Heart Association	30%	15%	55%
American Diabetic Association	30%	15%	55%
National Cancer Institute Recommendation	30%	15%	55%

The excess total calorie intake of the Western diet, which results in so much obesity, is not because European races are any greedier than other people. The reason is the imbalance of the constituents and the fearful amounts of fat and refined carbohydrate. These figures check out closely with the table shown in Chapter 7 and show that compared to the poorer populations in the world, "civilized" people consume up to seven times as much fat, six times and as much sugar, and double the protein, with accordingly higher incidence of degenerative diseases.

Consistently it has been shown that native populations on very low fat, low cholesterol diets do not show signs of heart disease or diabetes. A study of 800 New Guinea natives--"Primitive Life Keeps Tribesmen's Hearts Strong," (*JAMA* 210:1687, 1969 by P. E Sinnott), described the fat content of their diet to be 3%, with 3% protein and 94% complex carbohydrate, mainly sweet potato. They were adequately nourished and fitter physically than Americans. There was no evidence of diabetes or hypertension or heart disease among them; there was no rise in blood pressure with age.

At the US Navy Center for Prisoner of War studies in San Diego, California, John A. Plag, who directed the study, compared 78 ex-POWs of the Vietnam War with other navy contemporaries, each matched in rank, marital status, years of schooling, flying experience etc. Contrary to previous studies after other wars, the ex-POWs from Vietnam were healthier for their imprisonment, with a lower incidence of cardiovascular disease. They had suffered no malnutrition. Many had been overweight when captured but on the Vietnamese low fat and cholesterol diet of rice and vegetables, had dropped to the ideal weight.

Dr Michele Bremer in *Ecology of Food and Nutrition* described her study of the effects on rats and mice of the average "processed" human diet compared with a natural food diet. In her selection of breakfast foods she took a group of children to the supermarket and let them pick their five favorite cereals. She bought these and had them analyzed. Sugar was first or second ingredient in each and the highest protein was 5%. These cereals were not used in the experiment, she used the five best-selling ones instead which were somewhat better. Analysis of both diets found no deficiencies of any of the major nutrients.

While the animals on the natural diet remained sleek and healthy, the "supermarket group" were nervous and bit people handling them, and many of them grew to twice the size in girth. Later all the mice were given their unrestricted choice of both diets and the researchers were surprised when all the mice showed preference for the supermarket diet and ate twice as much of it as the other. The healthy mice soon took on the appearance of "supermarket" mice and developed skin diseases as had the others. This experiment of course again bears out exactly what Sir Robert McCarrison had found in India in 1927.

## Food addiction

As responsible citizens we are concerned with the degree of alcoholism and drug addiction which cause so much misery and death.

It may be well to consider that far more sickness, misery and death is caused by our national addiction to "Western" food.

Many a righteous person who is appalled by drugs and alcohol, could be classified as a "food-aholic" and many such people end up as chronic invalids just as much a burden to society as are alcoholics.

In conclusion to this chapter here is a comment on an article which appeared in the *National Times*, July 14, 1979 called "The Surprising Facts About Fast Foods" which was a report of an investigation

conducted by the School of Food Technology, University of NSW.

The article commenced: "A *National Times* investigation has found that the so called 'junk foods' from the three largest take-out food chains compare well with home-cooked steak and vegetables as part of a varied diet. In many dietary aspects they are superior to the home-cooked meal.

"The foods analyzed were: McDonald's Big Mac and large French fries; Kentucky Fried Chicken Dinner Box; Pizza Hut regular size Ham and Pineapple Pizza; and a home-cooked meal of steak, peas, potatoes, and carrots.

"Evaluations were made on the basis of dietary standards laid down by the National Health and Medical Research Council, The Australian Academy of Science, The National Heart Foundation and US Dietary Goals. There are too many components of a good diet to allow us to say categorically that any one meal was better than another."

The article went on to discuss comparisons of the various dietary components, and ended with this table of comparisons.

#### **What was in each meal?**

Component	Home Cooked Meal	Kentucky Fried Chicken	McDonalds	Pizza Hut
Energy, kilojoules	1,878	4,206	3,702	4,349
Calories	453	1,020	904	1,062
Protein, grams	45	61	35	65
Fat, grams	22	63	51	38
Available carbohydrate, grams	19	52	76	115
Fiber, grams	14	7	6	11
P/S ratio	0.6:1	0.9:1	0.4:1	0.7:1
Cholesterol, milligrams	98	256	140	82
Vitamin C, milligrams	42	17	34	15
Vitamin B1, milligrams	0.42	0.22	0.35	0.72
Sodium, grams	0.7	2.7	1.1	3.4

#### **How do meals compare with US dietary goals?**

Component	Goal	Home- Cooked Meal	Kentucky Fried Chicken	McDonalds	Pizza Hut
Protein energy	12%	41%	25%	16%	26%
Fat energy	30%	43%	55%	51%	32%
Carbohydrate Energy	58%	16%	20%	33%	42%
P/S ratio	1:1	0.6:1	0.9:1	0.4:1	0.7:1
Sodium, grams	2*	0.7	2.7	1.1	3.4
Cholesterol, Milligrams	300 **	98	256	140	82

\*Less than 2 grams per day.

\*\*Less than 300 milligrams per day.

A lot of people consume three meals like that a day, so you can see why our national health problem is so monumental.

1. The experts lay down standards which are woefully in error.
2. The misinformed public ignore these standards and consume a diet even more woeful.
3. The fast-food "take over" gains momentum, selling food nothing short of catastrophic yet receiving almost a commendation from the experts. The mind boggles!

## **STOP PRESS**

### **How Western can the Western diet**

get?

## Coke joke

The Coca-Cola company has turned to cookery books to win the hearts (and tummies) of school children. Along with promotional material claiming that Coke may ease the day's tensions (somewhat unlikely as a can contains around 35 mg of caffeine to pep up a child), the company forwards a small recipe book titled International Cooking with Coca-Cola as part of its school project material.

What Italians might think about the addition of one cup of Coke to minestrone defies imagining; what imprecations the chefs of France might utter were they to see Coke poured into French onion soup. Apart from these and other similar abominations--Coke in Indian curry, Hungarian goulash and so forth--the ingredients listed take little heed of nutrition. Lashings of salt are suggested (3 teaspoons for the minestrone) and canned and frozen foods are used in abundance.

*Choice*, September 1984

To further assist people break their bad eating habits, *The Health Revolution Anti-Cancer, Anti-Heart Attack Cookbook*, is now available with recipes for both the Pritikin and Gerson diets.

## CHAPTER SIXTEEN

# WEIGHT CONTROL

*"It must be jelly, 'cause jam don't shake like that."*  
Fats" Waller

Although everybody knows what it means, the term weight control is not quite right. What is really the object is fat control.

Nobody really cares how much they weigh, they care mainly about their appearance, and fat is ugly. To most folk weight is synonymous with fat, and when they lose weight they have lost fat, so what does it matter? Probably not much, but just to help you not delude yourself consider a couple of things.

If you want to look good, the shape has to be right, and your actual weight is not always a proper indication. Women are more figure-conscious than men and cheat with girdles and supports and bras to force their body into some sort of shape. Of course there is always the moment of truth when someone sees them naked.

Men do not have quite the same problem. In our society there are so many fat men they are considered quite normal and acceptable, and many fat man dressed in a well-cut suit can cut a fine figure to be admired. If the subject of weight is ever discussed such a man proudly asserts that he weighs exactly what he did when he played football at 20. Apart from the fact that many footballers, even teenagers, carry too much fat to start with, what has this fellow got to boast about?

When he was 20 his weight was proportioned mainly in muscular shoulders, body and legs. His body fat, if excess, was well distributed and he looked good. His bones were denser, stronger and heavier. So, if in the course of 20 years, his muscles have wasted and softened and bones become weaker and lighter, the man's weight should be a lot less. But it is not, because his face, neck, torso and backside are covered in fat and so he still weighs the same. Indeed this process need not take 20 years; it can happen in 20 weeks.

The good news is that it can be reversed in about the same time, but it should be remembered that being slim does not mean you have clear arteries.

With a few exceptions, all diet proponents agree that calories are the key factors. Calories are a measure of energy values. If your diet contains more calories than your body requires for energy then the excess is stored up as fat. All slimming diets will work if they contain fewer calories than your energy requirements.

If you increase your energy output to exceed your calorie intake, the same effect will be gained, as the difference has to be obtained by using up the body's stored fat. The amount by which the energy requirements exceed the calories eaten determines how fast the body fat is used up.

Most people need really to do both for good health--cut down calories and increase energy output.

The body's energy requirements vary not only with the amount of physical activity but with a person's basal metabolism. Lazy, inactive people may have a low basal metabolism due to being unfit physically, or perhaps because of low thyroid activity. Such people use less energy even when resting and are prone to sickness and obesity.



The reason that various slimming diets fail in the long run is that most people find them unsatisfying, and sooner or later, abandon them. People who cannot break their addiction to rich food will always have a weight problem. Some diets are satisfying but place strain on the digestive system eventually resulting in degeneration of the body.

The important thing about any diet is that it must contain all the essential nutrients. Then it must be modified to remove all the harmful components. This immediately disqualifies high protein or high fat diets.

High protein, low carbohydrate diets such as the Dr Atkin diet and the Scarsdale "Medical" diet are effective in reducing weight but are dangerous over a period. They work because they cut down on fat which has double the calories of protein, and because they eliminate refined carbohydrate which is loaded with calories. They rely on protein to fill you up and as explained in Chapter 15, this is where the danger lies. Part of the weight loss is because the body loses water in the metabolism of protein.

The Weight Watchers diet is very good but as mentioned in the last chapter, provides nowhere near optimal nutrition.

A low fat, vegetarian diet, preferably uncooked, achieves all the benefits of fasting, takes longer, but without depriving the body of any essential vitamins and minerals. This diet is the only one that covers all aspects of optimum health and slims you too.

How can a high carbohydrate diet achieve this! First recall the emphasis on the distinction between simple or refined carbohydrate and complex carbohydrate, because this is where the confusion about carbohydrates occurs.

Simple "refined" carbohydrates are dynamite. They are high in calories, and by their effect of causing hypoglycemia, they induce hunger and therefore more eating. Candy contains, by weight, six times the calories of boiled potato and eight times that of raw apples, but is completely devoid of any nutritional value. No wonder sugar is nicknamed "White Death". Alcohol, including beer, is refined carbohydrate.

On the other hand, natural carbohydrate is not only nourishing but filling too. Carbohydrate contains only half the amount of calories as fat.

Most slimming diets are high in protein and low in carbohydrate mainly because carbohydrate is considered to be the villain. This is quite wrong. If you ate nothing except complex carbohydrate food consisting of a reasonable variation of cereals, fruit and vegetables, your body would receive the ideal energy food, ample amino acids to provide all its protein requirements, and ample essential fats. And, here is the vital point of whole project--you can always satisfy your appetite without eating enough calories to make you fat.

Just think, if you had all the cereal (unprocessed) you could eat for breakfast, ate nothing but bread for lunch, and ate all the baked potatoes you could contain for dinner, your appetite would be satisfied before you could eat an excess of calories.

However, if you put sugar and full cream milk on the cereal; if you put butter and jam or salami on your bread at lunch, and sour cream or butter on the potato at dinner, then you have doubled the calories and you will get fat. But please do not blame the carbohydrate, it is sugar and fat that are to blame.

As explained in the previous chapter, the best type of carbohydrate to eat is in the form of ripe, fresh fruit and vegetables, preferably raw, in preference to grain products, which in more than moderate amounts can seriously upset the chemistry of the blood. The only willpower required is to select the correct foods because you can consume them to capacity and maintain calorie limits without thinking about them. The low fat, low protein, high carbohydrate diet conveys protection against all the degenerative diseases at the same time.

The evaluation by the Loma Linda University's Department of Biostatistics of patients at the Pritikin Longevity Center showed that the average weight loss during the four week course was 13 lbs for obese

patients and 10 lbs for overweight patients. And as described in Chapter 3, the weight loss was accompanied by significant reductions in cholesterol, triglycerides, blood sugar, uric acid and blood pressure.

While the diet is maintained, the weight reduction continues steadily until the ideal weight is reached. People who follow a low fat vegetarian diet are invariably lean and healthy and soon lose the desire for the "good things" that once did them so much harm.

The value of eating food raw has been discussed in the previous chapter but worth mentioning here are some further observations of Dr Edward Howell. In his tests of different diets on animals, Dr Howell noted that no matter how much raw food they ate the animals never became fat.

Exercise is an important but secondary factor in weight control. Fat contains so much energy that very little of it is used even in extended vigorous exercise. That is why you see so many determined but unsuccessful overweight joggers who unless they change their diets, and cut right down on alcohol, will always remain overweight.

## CHAPTER SEVENTEEN

# PHYSICAL EXERCISE

*"Those who think they have not time for bodily exercise  
will sooner or later have to find time for illness."*

Edward Stanley, Earl of Derby

(from *Conduct of Life*, address to Liverpool College, 20 December, 1873)

We are seeking perfect health--a fit, active, vigorous body with a highly efficient cardiovascular system, keen faculties, strong sex drive, disease-free, resistant to effects of heat and cold, stress, germs and viruses, with good digestion, elimination and stamina, and which will stay in that condition for a hundred years or so.

Some people, despite a sedentary lifestyle, have lived healthy, long and productive lives, having maintained the integrity of their bodies' tissues and vital organs by prudent eating and other sensible lifestyle habits. Others too have lived long, healthy and productive lives despite poor dietary habits, the integrity of their bodies having been maintained pretty well by a lifetime of regular physical activity. The longest lived people studied in the world are usually found to be those whose way of life has provided them with simple food, regular outdoor exercise, and freedom from stress.

While it is now common knowledge that physical exercise cannot prevent artery disease, and indeed may even precipitate a heart attack in those with blocked arteries, there is no doubt that regular exercise, by improving the circulation of the heart and the rest of the body, and by improving the general metabolism, **particularly the metabolism of blood fats**, will enhance health and provide strong protection against all disease.

The desired standard of physical fitness is brought about by what is called the "Training Effect" and the body is said to be "in condition". While some people's day-to-day activity maintains this standard, most will need to deliberately increase their physical activity in order to achieve it.

### Types of exercise and exercise programs

There are different ways in which a person can exercise, which are given specific names.

1. Isometrics is when muscles are contracted without producing movement; this does not require much oxygen. Muscle can be developed this way as in body-building, and when used by bedridden patients, wasting of muscles can be prevented. Isometrics do not achieve the training effect.
2. Isotonics contract muscles and produce movement, such as calisthenics or weightlifting. The oxygen requirements are low and training effect is negligible.
3. Anaerobics produce movement but are either not vigorous enough or too brief in duration, and not much oxygen is processed. Walking short distances or sprinting for brief periods are forms of anaerobics. Training effect is negligible.
4. Aerobics are a form of continuous exercise which demands oxygen but not to the extent of forcing the participant to stop. He can go on and on with the lungs supplying all the oxygen needed. This is

known as "endurance" exercise and this is what we need to produce the "training effect" in our bodies. This is what we want.

The type and level of activity you should undertake depends on your physical condition at the outset. There are a number of books on the subject and as with books on diet, they vary considerably in their advice. The reason that they vary is because the authors have different conceptions of what fitness is. Here is one definition:

"Fitness is a condition of the body (and mind) which enables it to perform its assignments efficiently without undue strain or fatigue, with adequate reserves."

What are the assignments? What do we want? Some people think fitness is having a lean body. A lot of nutrition-minded people think that way. Others consider a well-proportioned muscular body as fitness. Reasonable diet and isometric exercise for a few minutes a day can achieve this. To others a further requirement is a certain degree of agility and skill. Isotonics will produce this. A further requirement again may be sprinting or jumping ability--anaerobics.

We are getting closer, but read again the opening paragraphs of this chapter. That is what we desire, and the surest way of achieving such a high level of fitness is a program Of regular fairly extended exercise--aerobic or endurance exercise.

In 1958 the Canadian Air Force produced the famous 5BX exercise program. It is based mainly on calisthenics which when performed together with stationary running in an eleven-minute time limit will improve the fitness of a sedentary person to a reasonable standard. Done property it becomes aerobic exercise and three times per week is claimed to be sufficient.

My brother, at age 42, said 5BX was wonderful as it enabled him to surf three hours straight, several times a week. I pointed out to him his surfing activity was aerobics and in itself produced his high fitness level. He dropped 5BX and surfs and walks instead, still fit at 70.

A recent bestseller, *Total Fitness in 30 Minutes a Week* (1975) by Professor L. Morehouse, Professor of Exercise Physiology and Founding Director of the Human Performance Laboratory, University of California, claims that three 10-minute sessions per week of not very vigorous exercise will achieve fitness. The opening page says:

"Our thanks to those men and women who voluntarily exercised to exhaustion in physiology laboratories to establish that a desirable level of fitness can be achieved without strain or sweat."

That sounds pretty good, but what is a desirable level? Professor Morehouse says we need a certain amount of muscle strength and endurance in order to live well and carry out our daily activities effectively and without fatigue. A good definition?

Yes, but is it good enough?

The standard of physical fitness described by Professor Morehouse in his book as being desirable may be high compared to the average level among the population, but is not up to the standard we are seeking.

The proof of any pudding is in the eating. The only proof in the world in the field of longevity is to be seen by the study of those centenarians around the world still enjoying happy and vigorous life. There are many of them and most follow a lifestyle containing two common denominators:

1. Simple wholesome food habits.
2. A lifetime of regular exercise, whether at work or at play.

"Fitness is a desirable state for anyone who wants to lead a zestful and productive life and realize his full potential." So says Lt. General R. L. Bohannon (USAF ret.) in the introduction to Kenneth Coopers' *Aerobics*, first published in 1968 with many reprints since.

*Aerobics* (the word means sustaining life by the burning of oxygen) describes the relationship of endurance exercise with fitness and freedom from disease. In that book Cooper coined the term "Training Effect".

Copper, while in the US Air Force, was the first to scientifically evaluate the effects of aerobic exercise on over 15,000 people. Leaving the Air Force he established a clinic and research center at Dallas, where he has since evaluated and instructed many thousands more.

The physical training must be regular (at least four times a week), sustained and reasonably vigorous. We must burn oxygen with our effort, requiring the lungs and heart to maintain a high output. The heart deepens its stroke and increases its rate, blood and lymph circulation is boosted. Long vigorous walks, jogging, cycling, swimming or other such endurance exercise, preferably daily, are best. It should be carefully graduated initially because not only may the heart overload, but creaking knees and ankles must be strengthened as well.

It is the extended processing of oxygen for muscular energy and the rate of oxygen consumption which produce the training effect.

Major (later Colonel) Cooper devised a point system based on evaluating oxygen consumption with different forms of exercise related to time. It is all in the book. Thirty points a week are required to maintain a good standard and those points can be picked up in any number of combinations of different exercises. For instance, 1 mile walked or run in under 14.5 minutes gets 2 points, in under 12 minutes gets 3 points, in under 10 minutes, 4 points and so on. By comparison, swimming 500 yards in under 12.5 minutes gets 4 points. A popular workout for joggers is to run 1.5 miles in 12 minutes or less for 7.5 points. Four times a week give 30 points in 48 minutes total running time. Incidentally, 1.5 miles in 12 minutes is the pass rate in the Air Force test.

Less is demanded of women (1.35 miles) and less with age. After 50 a man passes with 1.25 miles and a woman with 1.05 miles in 12 minutes. There are lots of men over 50 who can make 1.75 miles, the excellent rating for young men. When you get into shape you will find at 12 minutes you are just warming up.

Nathan Pritikin called his exercise system "roving". Roving is essentially aerobic or endurance exercise but it is not done on a strictly calculated basis. You walk or run as you feel, starting perhaps with a couple of blocks, and with improved condition, extend to 6-10 miles. Many patients at the Longevity Center who at first could walk only a few yards, have improved over a four week period to accomplish 10 miles a day. It is never too late to start.

The 10 fundamentals of roving are.

1. Distance is important, time is not.
2. Select a distance to suit yourself.
3. Rove that distance four or five times a week.
4. Start slowly to warm up.
5. Increase your distance only when you are ready.
6. Use the heart recovery test as a gauge to slow down or speed up.
7. Give yourself variety.
8. Don't strain or compete against people or time.
9. Always enjoy your roving.
10. The program is for everyone, young, old, male or female.

Thus, the roving program is not very demanding, it is strictly on the safe side having been designed around people in pretty poor condition.

## **Heart recovery rate**

After exercise the heart rate gradually slows down to its normal rate. The quicker it returns to its resting rate, the better the fitness level. If the rate remains elevated too long it indicates the exercise has been too strenuous. You can check your heart recovery quite simply.

At the completion of the exercise--

1. Sit and rest for one minute.
2. Take pulse rate. Count for 30 seconds and double that count.
3. If more than 130 the exercise was too strenuous.

A count of 100 indicates a good level of fitness.

For "high risk" patients, jogging is not recommended because of the possibility of plaque breaking loose within an artery. This is possible with jarring or exaggerated movement and is thought to have precipitated Bing Crosby's heart attack while playing golf.

The roving program suggests working up the distance to 6 miles. If you took 1 hour 50 minutes for 6 miles which is very easy walking, you earn 6 aerobic points. So if you did that 5 times a week you would get 30 points and it would take a total of 9 hours.

The two systems seem to agree, and their results are thoroughly proven. They are based on facts documented years ago by physiologists such as Dr Wilhem Raab in his book *The Prevention of Ischemic Heart Disease* (Chas. Thomas, Springfield, Illinois, 1966) and by Professor Thomas Cureton, University of Illinois Physical Fitness Research Laboratory, in his book *The Physiological Effects of Exercise Programs on Adults* (Chas. Thomas, Springfield, Illinois, 1969).

When the physiological effects of exercise are understood, it can be seen that the main advantage of the training effect is that fat metabolism is more efficient both at rest as well as when exercising.

Even when not actively exercising, a fit person burns more fat in his body and his basal metabolism is high compared to an unfit person. Such people require less clothing to keep warm even though they have less body fat. Kenneth Cooper, while in the Air Force, conducted an experiment with two groups of men, one group physically trained, the other untrained, to observe their metabolism of fat. All the men consumed 1.5 pints of cream for breakfast, nothing else, and through the day blood tests were made. All the men's blood became infested with fat droplets but the trained men's blood cleared in four hours whereas the blood of the unconditioned men took up to 10 hours to clear.

On the other hand, vegetarians, without the high levels of fat and cholesterol in their blood do not need to the same extent, the protection of the training effect.

This then raises the point--what is the ideal amount of exercise?

Our object is to achieve optimum health through optimum body chemistry. We want our body cells perfectly nourished and cleansed, because it is at that level that health is determined. With healthy nourished cells supplied with lots of oxygen, there can be no disease.

This ideal condition can only be achieved with a pure, healthy bloodstream. This is the vital factor.

A low fat, vegetarian diet achieves this pretty well by avoiding toxins and high fat levels to begin with. Aerobic exercise helps to achieve this by burning excess blood fats for fuel.

Live cells can be kept in glass jars in laboratories in healthy condition providing the fluid medium in which they reside is kept pure and provides the cells with all their nutritional requirements, oxygen, and freedom from toxins. It is feasible then that a diet may be possible allowing perfect body chemistry without much exercise but it is very obvious that the more "improper" a person's living habits may be, the more vital physical exercise becomes.

Assuming you are a typical American or European having always consumed a Western type diet, your

arteries will not be in good condition, so not only do you have to clean your blood, you must clean the linings of your arteries as well. The more carefully graduated endurance exercise you get, in conjunction with a low fat/cholesterol diet, the faster will this be accomplished. In the absence of excess fat in the blood, the fatty atheroma choking the artery walls is gradually reabsorbed and used as fuel.

It should be remembered too, that the incidence of cancer among athletes is only one-seventh that of the general population.

So the answer to what is the ideal amount of exercise could vary greatly, depending on a person's overall lifestyle. It will be recalled that some of the centenarians studied by Dr de Lacy Evans had sedentary lives. The author, who spends most of his life reading and writing, maintains a good level of fitness by long hours of outdoor manual work on his steep Mountainside fruit orchard. This is in contrast to the 40 miles a week I used to run, and which for my purposes was probably excessive. The fittest I have ever felt has been on the occasions in my life when I have indulged in extended periods of hard manual outdoor work.

What we do know is that many people suffer from a lack of exercise and that rarely do people suffer from an excess of it.

Perhaps hours of "roving" may be the ideal if you have the time and the inclination, but on the other hand the more vigorous Cooper aerobic system works very well for those with less time to spare.

## **Physiology of exercise**

Energy for muscular exercise is supplied by fat and carbohydrate oxidized in the muscle tissues. Fat is stored throughout the body in convenient places and in body cells as well, whereas carbohydrate is stored in the liver and muscle tissues as glycogen derived from blood sugar (glucose). Fat is a much more compact fuel than glycogen as it contains twice the amount of potential energy as glycogen.

Thus body fat is the main form of stored energy, and for levels of normal activity it supplies the bulk of the body's muscular energy, together with some carbohydrate. So much energy is contained in fat that even lean people have sufficient for days of activity even when deprived of food.

Blood sugar contributes to energy production by the muscles and continually enters the bloodstream from the intestines while there is food being digested. That which is excess to normal blood levels is stored by the liver, and what cannot be stored converts to fat. The primary use of blood glucose is for fueling the cells of the brain and nervous system, which use glucose exclusively, and rely entirely on the level available in the blood. When glucose is not available from the digestion of food, the liver maintains the correct level in the blood by converting glycogen back to glucose and releasing it.

The ratio of fat and carbohydrate used by the muscles varies with the intensity and duration of the exercise performed.

The purpose of muscle glycogen stores is--

1. Glycogen can provide bursts of maximum energy quickly, without using inhaled oxygen (anaerobic exercise). These bursts must be of only brief duration because with insufficient oxygen for complete combustion, lactic acid is formed which prevents further muscle activity. Pain may occur, but the lactic acid quickly clears when the exercise is reduced.
2. Glycogen, containing some oxygen itself, can provide more aerobic energy for a given amount of inhaled oxygen than fat. Aerobic exercise at low and medium levels can be sustained mainly by fat but as the exercise intensity increases, the oxygen available becomes limiting, and more glycogen is called upon. With intense sustained exercise, glycogen becomes the major energy source but the effort can be sustained only until the glycogen runs out.

Thus for our purpose of achieving a clean bloodstream and clean arteries and optimum health, it can be seen that moderate aerobic exercise is ideal because we are concerned with fat metabolism, particularly if not maintaining proper dietary habits.

Two well-built people can stand side by side, both in apparently good physical condition, and yet one may be dreadfully unfit and the other capable of running a marathon. Somewhere inside their bodies they are very different, and recent findings from several Scandinavian sources explain what this difference is.

Dr J. P. Clauson and Dr Bengt Saltin took physically untrained subjects and on each one selectively trained different limbs, leaving other limbs untrained. When tested for cardiovascular function, the subjects revealed impressive improvement when the test involved the use of the trained limbs, and little improvement if the test involved use of untrained limbs.

Thus it was shown that most of the improvement in general metabolic function, i.e. training effect, is specific to those muscles which have been exercised by the training.

Two other experimenters, Dr P. Anderson and Dr Henriksson, demonstrated that the muscle tissue changes with training. Biopsies taken after eight weeks training showed in the muscle tissue an increased level of enzymes which play a part in the utilization of substrates and the release of energy. At the same time, the content of energy substrates in the muscle cells and the density of the capillaries supplying the muscles with blood had increased.

Comparison of the responses when testing a subject with one "trained" leg and the other "untrained", demonstrated some of the metabolic consequences of training. At rest or when exercising there is an increase in the amount of fat oxidized by the trained muscles and a corresponding reduction in the amount of carbohydrate oxidized. Thus glycogen is conserved and exercise potential increased. The untrained muscles release lactic acid which indicates incomplete combustion due to insufficient oxygen, and are more prone to discomfort or pain.

Thus the primary changes in training are improvements in the chemistry of the muscle cells and in the capillarity of the vascular bed--the blood supply--of the muscle. These adaptations ensure that the cells of trained muscles can extract oxygen from the circulating blood more completely--removing say, two-thirds to the available oxygen instead of half. These metabolic improvements also reduce the local concentration of certain intermediary metabolites. It is this concentration which determines the calibre of the blood vessels supplying the muscles and hence the volume of blood they receive. Accordingly, the muscles need and receive a smaller blood flow than before training, and therefore place less demand upon the heart.

The main aspect which affects a person's muscular endurance for vigorous exercise is the amount of glycogen (carbohydrate) stored in the muscle tissue. This varies not only with training but is greatly dependent on diet. It was described in Chapter 15 how athletes on a high complex carbohydrate diet displayed three times the endurance as athletes on a high protein and fat diet. All champion athletes of the present day require the high natural carbohydrate diet to attain their performance.

Although fat alone provides energy, when a runner's leg muscles run out of glycogen he can no longer run. Similarly, when a boxer's arms run out of glycogen he may scarcely be able to raise them although his legs are still okay.

Sometimes an athlete will run out of liver-stored glycogen as well, resulting in an immediate drop in blood sugar and consequent irrational behavior. The blood sugar level can be almost immediately restored by eating some food, but the glycogen stores may take hours and several meals to replenish. Depleted muscle glycogen stores may take from 10 hours to several days to replenish.

Exhaustion of glycogen stores occurs only when exercise is taken to extreme limits and rarely happens to ordinary people on a reasonable fitness program.

In summary then, the training effect--:

1. Increases the capacity of the trained muscles to store glycogen.
2. Increases the efficiency of fuel combustion.
3. Increases the capacity of the muscle to utilize fat, thus sparing glycogen and increasing maximum potential.



4. Increases oxygen available for fuel combustion by way of improved blood supply.

This information explains a few anomalies. Such as why a swimmer with a high degree of cardiovascular fitness may not indicate that degree of fitness if tested by the 12-minute running test or a treadmill test. It explains why some thin and wiry people are stronger than others with bulging muscles. Also explained is how Cooper's trained men metabolized the heavy cream in four hours. The lower blood pressure of trained individuals results not only by virtue of better circulation and lower blood viscosity but also because less blood flow is required.

It becomes apparent that for optimum fitness, all muscles should be trained, for instance swimming and running may be better than just one or the other.

Sometimes physical training causes false symptoms of disease:

1. Athletes generally have greater numbers of red blood cells in their bodies but because their total blood volume is greater as well, the concentration of red cells in the blood is lower (ie lower than what is considered normal)--Because of this lower concentration they may be mistakenly assessed as anemic.
2. Sometimes hepatitis is mistakenly diagnosed when blood enzymes levels are elevated following vigorous exercise.
3. When blood sometimes appears in the urine of athletes after strenuous exercise, kidney disease is suspected. This is not uncommon and usually disappears within two days.
4. It was described in Chapter 12 that 25% of athletes over 40 display heart irregularities when tested on a stress ECG. Whereas these irregularities are considered sometimes as false symptoms, it is very likely that on the wrong diet, no matter how fit, a person will have some degree of coronary artery blockage. Thus I suggest such irregularities should not be regarded as a false symptom and that proper steps are taken to correct the situation while at the same time extremes of exercise are avoided.

Overtraining by zealous athletes can be highly stressful and occasionally cause debility and fatigue and they become susceptible to infection. On rarer occasions runners collapse and sometimes die of cardiac fibrillation when attempting strenuous feats of endurance. They are usually men approaching middle age subsequently found to have cardiovascular disease. Such men have the misapprehension that strenuous exercise conveys. Immunity to heart attacks, whereas a correct diet and a much less strenuous exercise program would have achieves their purpose.

## General discussion

Neither 5BX nor *Total Fitness in 30 Minutes a Week* mention diet and its relationship to heart disease.

Professor Morehouse includes a chapter titled "Why Cardiologists Exercise", In the first paragraph he says: "cardiologists theorize that a well conditioned heart will have more capillaries to take over if and when there's a stoppage of blood vessel". I would like to point out that this is not a theory. Collateral circulation has been shown over and over again to develop as a result of exercise. It will develop without exercise to some extent to help a blocking artery, but exercise brings about a vast improvement.

To what extent a person living all his life on a low fat, vegetarian diet needs to exercise for best results I do not know. We do know that the fittest oldest people in the world eat simple food and exercise a lot.

Whereas, in our civilization, women outlive men on the average by about five years (due probably to the more debilitating lifestyles of our men generally), in Hunza and among the primitive Eskimos, the men (who are more physically active) outlive the women by about five years.

Getting back to ordinary folk. Regardless of what they have appreciated from the chapter on nutrition, I somehow doubt that many people, unless they have been frightened already, will at once relinquish their favorite foods. That is their business, but it should be registered very clearly that aerobic exercise is the

second line of defense against degenerative diseases, and therefore should not be skimped. I think it is a rule of life that you get a reward only commensurate with your effort in the long run.

Quoting from *Aerobics* Major Cooper says:

"This program has been tested to exhaustion, by the most modern means available, both in the field, and in the laboratory. And it has been proven several thousand times over in the only place it really counts--in the human body. There's only one problem remaining. I can give you the program, but I can't do it for you. You have to do the rest. It isn't easy, but it works. Keep this in mind whenever you think about quitting: it's medically sound and it works."

It works all right, as anyone who has seriously tried it knows. The writer checked his medical records back to 1945 and sure enough with passing years the blood pressure figures showed the "normal" increase. From the commencement of training in 1969 the trend reversed and blood pressure soon fell to 114/70, resting pulse rate 42, same as at age 21.

There are many intent people who mistakenly consider themselves in good shape but are nowhere near it, and confusion arises when occasionally one of them keels over. Sometimes it may be someone jogging or playing squash, Unless a good standard has been attained and a prudent diet followed, such exercise could be dangerous. Playing squash requires a high fitness level, and the amount of squash played by most people is insufficient to achieve or maintain such a level.

Gadgets, weightlifting, touching toes, social tennis, golf, sailing and gardening may make you look fit on the outside, are beneficial to some extent, as indulged in by most people, but they may not achieve the desired training effect.

Side benefits of exercise accrue gradually too. Toned up postural muscles prevent back strain and "slipped discs" and many common ailments accepted by most people as normal, just do not happen any more, eg. indigestion, constipation, colds, fatigue etc. and although exercise may take up an average say of 30 minutes a day, fit people have more spare time because they need only six or seven hours' sleep.

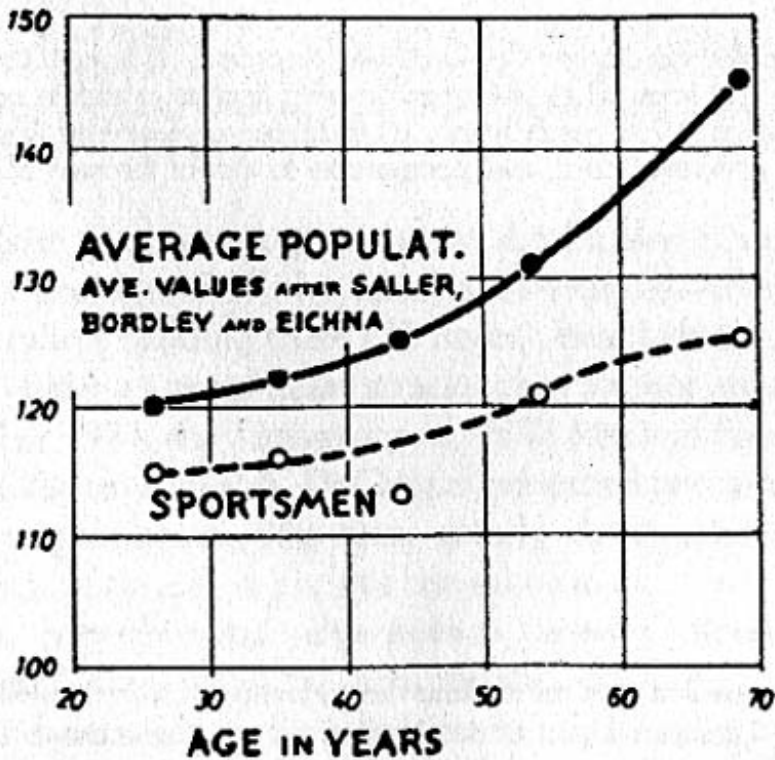
Cooper also described many more dramatic recoveries from disease such as ulcers, glaucoma and emphysema achieved by endurance training--one USAF fighter pilot who was finally reinstated to operational flying status, having been grounded with heart trouble.

There are many recorded cases of recovery from heart trouble achieved by physical training. The most spectacular, in Australia anyway, must be that of Norman Cutter of Adelaide, who suffered a severe coronary attack at age 47, and who, completely fed up with being a permanent invalid, embarked on his own training program. Some years later he demonstrated his renewed self in a non-stop ascent (by stairs) of the AMP Building in Sydney, and later in a non-stop ascent of the Empire State Building in New York. At the age of 59, he raced a 21-year-old Adelaide football player up the tallest building there (22 floors), beat him by one floor. He says it is a good idea to avoid heart attacks; they are not much fun.

The effect of training on heart and circulation and its importance in preventive cardiology

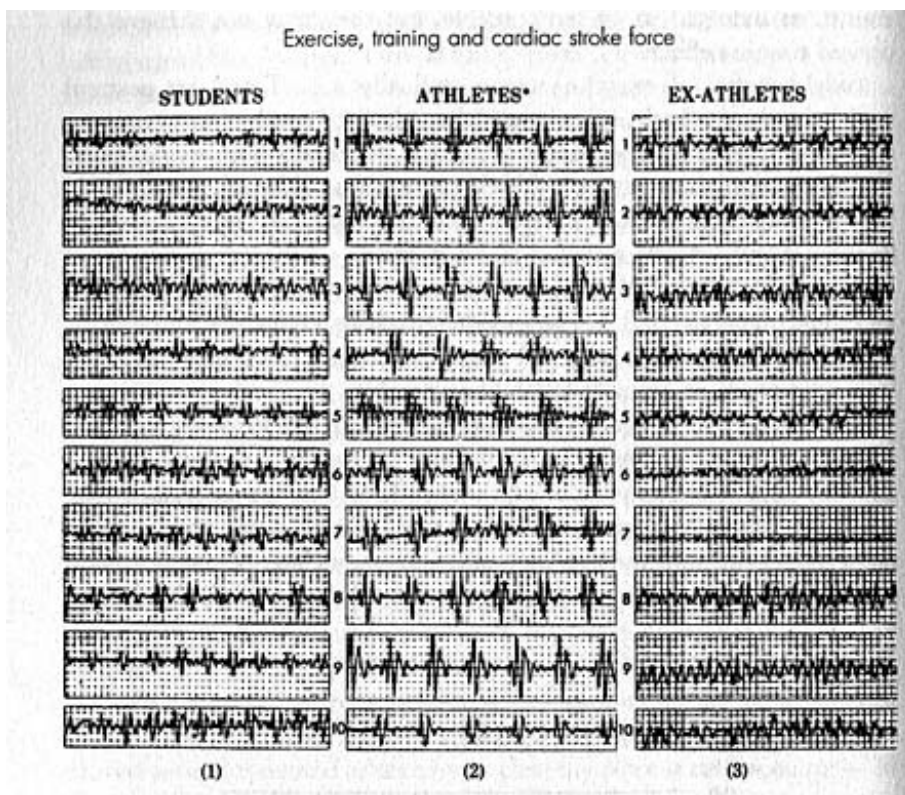
# SYSTOL. PRESSURE

mmHg



Systolic blood pressure in or, average population as compared with that of well-trained sportsmen (5) (Courtesy of Dr D. Steinkopff, Darmstadt, 1956)

Exercise, training and cardiac stroke force

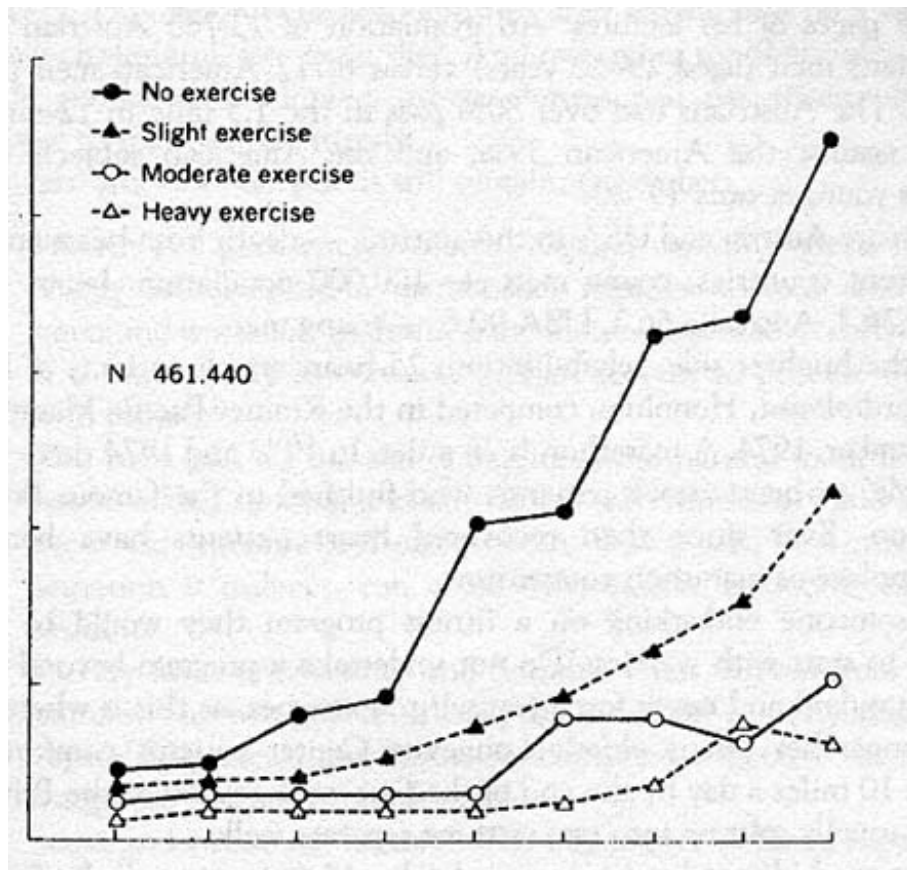


Three series of ballistocardiograms consecutively recorded: (1) from 10 untrained students aged 18 to 21; (2) from 10 NCAA championship finalists in middle and long distance races in Austin Texas, 1958; and (3) from 10 middle-aged ex-athletes who eight and more years ago had performed on a level comparable to that of the men whose tracings are shown in (2).

Note: the rapid weak action of the students' hearts compared with the slow powerful action of the athletes'. The heart action of the middle-aged ex-athletes shown here is extremely poor, but nevertheless, by graduated training, good heart condition can be

restored to such people (see reference Norman Curren). Do not confuse this ballistocardiogram with electrocardiogram.

Results--one year later



Death rate by degree of exercise and age group during period of approximately one year after last survey. For example, in the age group 60-64, 1 per cent (1/100) of the men in the heavy exercise category died, whereas 5 per cent of those in the no-exercise group died during the follow-up year. (Adapted from Hammond [226])

In September 1974, the University of NSW Medical Foundation held a seminar on Executive Health. Dr Cooper presented two lectures--clear cut data, not speculation. His data clearly demonstrates the direct beneficial effects of fitness on each of the following factors:

Depression, hypochondria, absenteeism, obesity, ulcers, pulmonary disease, general susceptibility, arrhythmia, abnormal ECG, work performance, efficiency, body shape, ability to handle stress, vital capacity, condition of heart tissues and blood supply, resting heart rate, maximal heart rate, blood pressure, blood cholesterol and triglycerides, fasting blood sugar, recovery from heart disease.

For those loafers who derive comfort having read occasional reports of joggers dropping dead, check this one paragraph out of 31 close-typed foolscap pages of his lectures. An evaluation of 13,763 Austrian (not Australian) men (aged 29-30 years) versus 6,712 American men (aged 19-20). The Austrians had over 80% pass in the 1.5 mile in 12-minute test as against the American 39%, and the American subjects were 10 years younger, only 19-20!

Compare Austria and USA in this statistic--death from heart attacks in different countries, young men per 100,000 population. Japan 18.5, Austria 36.2, Australia 66.3, USA 90.6--young men.

On the brighter side, rehabilitation: 25 heart attack patients of Dr J. Scaff, cardiologist, Honolulu,

competed in the Rimner Pacific Marathon, 15 December, 1974. A marathon is 26 miles. In 1973 and 1974 there were 13 people, ex-heart-attack patients, who finished in the famous Boston Marathon. Ever since then recovered heart patients have become commonplace as marathon competitors.

For someone embarking on a fitness program they would be well advised to start with walking. Do not undertake a program beyond your actual standard and never force yourself to extremes, as this is where the only danger lies. Many elderly Longevity Center patients comfortably manage 10 miles a day by the end of the four-week session at the Pritikin Center, usually split up into two or three separate walks.

It is a good idea to have a proper check-up first to note all the figures, basal pulse rate, blood pressure, weight, cholesterol, triglycerides, blood chemistry etc, and then observe the improvements as you progress.

Elaborate "gear" is unnecessary. Those flash tracksuits are only to keep you warm while you are loafing. Sweating is not the object, it is just a byproduct, and is only a temporary loss of water while the body is trying to cool itself. Overheating can be dangerous, resulting in fainting, even sudden death. To lose fat you must burn it as fuel by activity.

If running, at the completion of each session walk for about five minutes as most of the blood will have been circulating in the lower part of the body, and walking will keep assisting its return upwards until circulation is rearranged. Running on grass or firm sand, barefooted, is less strain on feet and ankles and shins. They are painful enough at first.

## **Note well**

Having read of the wonderful benefits of endurance exercise you can see it would be easy to accept aerobics as a "cure all". By improving oxygen transport, it benefits all functions and the improvements are rapidly felt; they are measurable and impressive--BUT--

Remember heart attacks may occur during strenuous exercise and it is important to ensure adequate circulation by first lowering the blood viscosity. This can only be accomplished after several days on a very lowfat, low-cholesterol, low-sugar diet. And remember too that unless such a diet is permanently adopted, atherosclerosis will not reverse but will continue to increase relentlessly.

In case any misconceptions still remain, remember:

1. Protein is a poor energy source. Natural carbohydrate is the best energy source. Protein metabolism requires copious amounts of water and water lost in flushing the kidneys can lead to dehydration. It is unnecessary to consume animal protein to provide the body with protein.
2. The body gets all the salt it requires from natural food. It should not be added to food, and salt tablets are unnecessary and harmful even with exercise and perspiration. Excess salt, by virtue of the urination it induces, can cause dehydration. Endurance athletes avoid it.
3. Dietary fat is unnecessary and harmful when derived from animal sources. The best source of body fat is natural carbohydrate foods: vegetables, cereals and fruit. Concentrated vegetable fat such as margarine and oils is not desirable.
4. Sugar and sweets are harmful. The best source of blood sugar is the high natural carbohydrate diet.
5. It is perfectly safe to drink moderate amounts of water while exercising to replace that lost by perspiration.

The faculties of keen eyesight, good hearing, clear thinking, efficient body functions and so on, can only be gained with completely clear blood vessels. And until runners ensure the freedom of their arteries, the occasions where, now and again, some of them are stricken with fibrillation, will continue. The "carte blanche" for superbly fit people to eat and drink as they please, and which made me smug for years, never existed. Remember too, that if exercise is discontinued, the training effect will be lost in a few weeks.

This recent statement by Dr Dintenfus correlates perfectly. "Studies of athletes, normal individuals and

patients with cardiac and renal diseases show a progression from a low blood viscosity with a high flow velocity among athletes, to an elevated viscosity and low flow velocity among patients. Furthermore, my colleagues and I have found time and again an elevation of blood viscosity among apparently healthy individuals who later developed symptoms of heart disease and cancer."

In a nutshell, that means physically fit people have free-flowing blood, and with free-flowing blood they are strongly insured against degenerative diseases.

*By chase our fathers earned their food,  
Toil strung their hearts and purified their blood,  
But we their sons, a pampered race of men,  
Are dwindled down to three-score years and ten,  
Better to hunt in fields for health unbought,  
Than fee the doctor for a nauseous draught,  
The wise for cure on exercise depend,  
God never made his work for man to mend.*

John Dryden, 1680

## CHAPTER EIGHTEEN

# NATURAL LIGHT AND HEALTH

*How's your Pineal gland? Don't laugh,  
it's in your head.  
It thrives on ultraviolet waves  
but not on infrared.  
I owe this information to John Ott of USA  
It may surprise and keep your eyes  
wide open through the day.*

Although everybody knows that a sunny climate is good for invalids, the study of sunlight as a health promoting agent has received comparatively little attention. However, there is a lot known about the effects of light) and over the years a great number of books on the subject have been written. One of these, *Light and Its Rays as Medicine* by Dr S. Pancoast of Philadelphia was published in 1877 and described that doctor's successful employment of color filtered sunlight as a therapeutic agent. In another book written about the same time, *How to Prolong Life*, the author Dr Charles de Lacey Evans of England said:

"The life of every created being is the more perfect the more it enjoys the influence of light. Let a plant or an animal be deprived of light, notwithstanding every nourishment, care, and cultivation, it will first lose its color, then its strength, and at last utterly decay."

It has been observed in Norway that in the "morketiden" (murky time) from November 25 to January 21 when at the high latitude of the city of Tromso the sun never comes into view, the morale of the people is affected. Tromso psychiatrist, Dr Reppersgaard, said, "The whole city slows down, people's concentration and work capacity reduce, and they are always tired".

"The least desirable elements of human behavior come out," said an Oslo psychologist. Sales of sleeping pills, pep pills and tranquilizers rise sharply, accidents increase.

For many years observations on the health promoting effects of sunshine have emphasized the special qualities of the ultraviolet spectrum, to which is credited stimulation of the ductless glands, improved circulation, enhancement of red cell hemoglobin and general quality of the blood.

A recent news report from England described the markedly higher performance of school children whose classrooms were illuminated with ultraviolet-emitting fluorescent lights instead of incandescent lights.

The beneficial effects of sunlight and artificial ultraviolet light are gained by way of visual processes and by direct exposure of the body. In his fascinating book, *Sunlight Could Save Your Life*, Dr Zane Kime described how body chemistry responds via both pathways. The favorable effects are general, the same as gained from the training effect of regular exercise, and are readily measurable. They include: improved fat metabolism, lowered blood fats, lowered blood cholesterol, lowered blood sugar, improved circulation, increased heart output, lowered resting heart rate, lowered blood pressure, striking increase in blood

oxygen, lowered respiratory rate, less lactic acid formation with exercise, improved calcium uptake, increased energy and endurance, greater tolerance to stress, stimulated immune system and better resistance to disease, and increased production of sex hormones (see further reference at end of chapter).

Overexposure to sunlight is harmful, however, and people who are indigenous to the tropics have the built-in protection of dark skin. Races who have evolved in latitudes where the sun is less intense and often obscured by clouds, have light-colored skin which permits easier penetration of the sun's rays. They are protected from overexposure to a great extent by the ability of their skin to darken (sun tan) when necessary. Unfortunately for dark-skinned races, their skin cannot tighten to adjust for lack of sunshine, and it is significant that, outside the tropics, they suffer more disease than whites, other factors being more or less equal. In the USA according to Dr Kime, blacks suffer double the incidence of hypertension (high blood pressure), double the deaths from diabetes, almost double the deaths from influenza and pneumonia, and 20% more deaths from cancer. Black babies born jaundiced respond poorly to light therapy, and black children suffer a higher incidence of rickets.

What stimulated the current interest in the effects of light were the observations in the 1960s of Dr John Ott of Chicago (now of Florida) which were originally reported by *Popular Science*, February, 1969. Dr Ott has since written two books, *Health and Light* (1973) and *Light, Radiation and You* (1982) which are indeed enlightening in that the medical profession are realizing that the value of sunshine goes far beyond cheering people up and allowing them to produce vitamin D.

Sunshine, apart from directly influencing body chemistry by direct penetration, is reflected by the atmosphere, and that which enters the eyes stimulates hormone production in the body by its influence on the retinal--hypothalamic--endocrine system of glands. The light affects the glandular system by entering the eyes through the pupil and, by way of the retina, appears to cause a reaction with the pineal gland located behind the eyes. The production of the pineal hormone, melatonin, is thereby influenced which in turn interacts with the other endocrine glands. Specifically, the ultraviolet spectrum of light is beneficial, and deprived of it, the body chemistry is adversely affected. Ordinary artificial light does not contain this spectrum, but certain fluorescent lights do, in fact full-spectrum daylight-simulating lights have been developed. Ordinary glass and spectacles shield out most of the ultraviolet light.

Dr Joseph Meites, endocrinologist of Michigan State University, in 1969 stated that light entering the eyes causes nerve impulses that influence the lower brain and pituitary gland that trigger the release of other hormones. Dr Meites further stated, "We have no idea how many diseases are linked with hormone problems, but we do know that several diseases such as diabetes, infertility, cancer and thyroid disorders are involved with hormone imbalance".

In reporting on the effects of exposure to ultraviolet light, Dr Ettinger in his book, *Medical Radiation Biology* (Chas. C. Thomas) said, "Irradiation of human subjects with erythema-producing doses of ultraviolet resulted in an improvement of work output. In studies on the bicycle ergometer, it has been shown that under these laboratory conditions, the work output could be increased up to 60%. Analysis of this phenomenon revealed that the increased output is due to decreased fatigability and increased efficiency. cardiovascular responses served as an indicator".

On the other hand, artificial light of the wrong wavelength (particularly pink and red) has a distinctly harmful effect on the body's metabolism, to the extent of causing malabsorption of minerals, various kinds of neuroses, and exacerbating cancer. These effects have been observed in humans, whilst in animal experiments, unnatural light wavelengths have caused infertility and bizarre behavior such as cannibalism.

Dr Ott's interest in the subject began in the 1960s when he was making a time lapse photography movie for Walt Disney's feature, *Secrets of Life*. In this type of photography, single pictures are taken at spaced intervals, of say a growing plant, which when shown through a projector at normal speed, give the impression that the plant is growing and maturing in only seconds. The movie may take months to complete.

In the course of a sequence featuring a pumpkin vine, he noticed that using certain fluorescent lights, all the female flowers on the vine suddenly died, with the male flowers still healthy. When the sequence was



repeated with different lights all the male flowers perished. It was only then he realized that the light emissions were responsible, and experimented to find a light source which was like natural daylight and which did not harm the flowers.

That sunlight has a profound effect on human health became startlingly apparent to Dr Ott through a surprise personal experience. He had been suffering badly from arthritis and had been advised that he would need a plastic hip joint before very long. He had heard many stories about arthritis being affected by weather but had not noticed any improvement at all when visiting sunny Florida occasionally from his home at that time in Illinois.

One day at home he broke his glasses and because his spare ones were uncomfortable, he made do without them while waiting for new ones. Suddenly, after a few days working outdoors, he found he no longer needed his walking stick and that his arthritic elbow felt fine. From there on he went without his glasses most of the time and after a while found that when he wore them they caused him eyestrain. His oculist re-examined his eyes and discovered that they had improved greatly and prescribed new ones because the previous prisms required to correct a muscular weakness were no longer needed.

Dr Ott decided to have his hip joint x-rayed again and the x-ray showed a distinct improvement. A physical examination revealed the complete disappearance of a 30% restriction to the rotational movement of the hip joint, and of course, the hip joint operation was no longer necessary.

Many experiments with plants and animals were made, all of which showed that natural unfiltered sunlight is essential for optimal body condition, but that the necessary light spectrum can also be provided by certain fluorescent lights.

Here is an extract from Dr Ott's book:

"As I did not want to give the living animals too much ultraviolet light to start with, I was not certain just what intensity would be within a safe limit. While in the process of trying to decide how much ultraviolet to give the animals, my wife and I had dinner one evening in a restaurant known as 'Well of the Sea', in the basement of the Hotel Sherman in Chicago. As soon as we entered the restaurant I noticed there were black light ultraviolet lights placed throughout the ceiling.

"They had been installed solely for ornamental purposes to cause designs on the waiters' coats, as well as the menus, to fluoresce in the otherwise subdued light. The next morning I went back to the restaurant with a meter to measure the intensity of the ultraviolet at various distances from the ceiling, such as table level and the eye level of the waiters as they walked directly under the various light fixtures. I also wanted to ask the captain of the waiters a number of questions. In view of the general concern, especially at the time, regarding the danger of overexposure to ultraviolet, I wondered how long the lights had been installed and whether he had experienced any unusually high turnover among the personnel working in the restaurant. I asked him if any of the men had complained of any eye problem, skin cancer, or other difficulties such as sterility, which might be attributable to working long periods of time under the black light ultraviolet. The captain told me that he had essentially the same group of men working for him as when they had opened the restaurant 18 years before. He said that the ultraviolet lights had been in use continually during that time, and that the health record of his men had been so consistently excellent that the manager of the hotel had checked into the situation, with medical supervision, to try to determine why this particular group of men was always on the job, even during flu epidemics, when other departments in the hotel would be shorthanded because of employees' illness".

Here is another case quoted from the book:

"Obrig laboratories, located just north of Sarasota, Florida, is one of the largest manufacturers of contact lenses and has approximately one hundred employees. During the entire flu epidemic (1968-69) not one employee was absent because of any flu-type ailment, according to Philip Salvatore, Chairman of the Board. Obrig Laboratories was the first to design a new building using full spectrum lighting and ultraviolet transmitting plastic window panes throughout the entire office and factory areas. The added ultraviolet seemed to tie in closely with the results noted at the 'Well of the Sea' restaurant in Chicago. Mr

Salvatore mentioned that the Obrig employees had not been given any mass inoculation against Hong Kong flu. He also commented that everyone seemed happier and in better spirits under the new lighting, and that work production had increased by at least 25%".

Having delivered a lecture on the subject, Dr Ott was approached by the manager of a radio station, WILZ, of St Petersburg, Florida, Mr Richard Marsh. Mr Marsh told him of the deterioration of morale and efficiency at the station when deep pink fluorescent lights had been installed. The staff had become irritable and difficult to manage, two of them tendering their resignations. When it was realized that the pink lights were irritating everybody, they were replaced and an immediate return to good morale and efficiency occurred. The two resignations were withdrawn.

The animal experiments described are more specific, and the effects of poor light varied from infertility, congenital defects, all male litters, to falling hair, shrivelled tails, dental cavities and so on. And for years the poultry industry has known and used the fact that light received by a fowl's eyes stimulates the pituitary gland and increases egg production.

Dr Ott described many other observations of the effect of poor lighting on humans, including some related to cancer. He relates them as being observations and nothing else, but there can be no doubt that any factor that can affect hormonal balance must influence any disease of metabolism.

One particular case was in 1961 when the Communicable Disease Center of the US Public Health Service in Atlanta reported that a school in Niles, Illinois, had the highest rate of leukemia of any school in the country. In fact, it was five times the national average. Dr Ott visited the school and interviewed the teaching staff, superintendent and maintenance staff. He learned that all of the children who had developed leukemia had been located in two classrooms. Because of glare, the windows of these particular classrooms had been customarily shielded by translucent greenish curtains, light being provided by "warm white" fluorescent lights which are strong in the orange-pink part of the light spectrum. When the lighting was changed, no further problems occurred and the situation has since been normal.

Previous reference has been made to the Hunzas, the vigorous long-lived people of the mountainous westernmost part of Kashmir, now Pakistan. In her book, *Health Secrets of Hunza*, Renee Taylor describes the custom of Hunzas of "sunning" their eyes by blinking them directly at the sun. They consider it a health-giving activity, the origins of which are unknown. This activity could easily be overdone, I imagine, and it is not necessary because the light can enter the eye without looking directly at the sun.

What about other forms of radiation? It is known that nuclear and x-ray radiation can cause great harm. Dr Ott describes the disturbing effects of emissions from color television receivers. One case was the disruption of a rat breeding program when the litters dropped from eight to 12 babies down to one or two, and many died. The disruption was caused by a color TV set located 15 feet away from the rats and with two partition walls in between. It took the breeding program six months to return to normal after the TV set was removed.

Again from *Health and Light*, here is an observation on the effect of radiation on biological rhythms:

"However, as far back as 1729, M. de Mairan submitted a paper titled *Biological Observations* to the French Royal Academy. He noted that the sensitive plant folded its leaves at sunset in a fashion similar to the way in which the plant reacts to touch or agitation. He further noted that the phenomenon occurs even if the plant is kept in the dark and not exposed to the sun or the great outdoors. In an attempt to explain the persistent rhythms of the sensitive plant in the darkness, Mairan went on to suggest that all such rhythms are being forced on the organism by some unknown factor in the universe. Nevertheless, research procedures today, in studying the phenomenon of the so-called built-in biological time clock in relation to light and darkness, consider light only as that part of the electromagnetic spectrum to which the human eye is sensitive. What the human eye does not see is generally thought of as darkness, with the connotation that no further radiant energy exists that could produce a photobiological or photosynthetic response. This may raise questions about similar responses that have been observed in so-called darkness and have been called chemosynthetic because of the theoretical absence of any light energy.

"Accordingly, I designed an experiment to determine if some of the wavelengths of general background radiation, beyond the human range of vision, might be directly controlling at least some of the so-called circadian rhythms.

"Six sensitive plants (*Mimosa pudica*) were placed at noon in a dark closet made of wood but the walls and ceiling of the room were of concrete four to six inches thick. The outer walls of the building were of brick, and the roof of slate, interior construction was of wood and plaster.

"The leaves of the plant remained open and the leaf stems, or petioles, in the upward daytime position until sunset. Then the leaves folded and the petioles dropped downward to the normal night-time position. They remained in this state until sunrise, then both the leaves and petioles resumed their normal daytime, open and upward position.

"As the only practical shielding against some of the general background radiation--especially cosmic radiation--is a massive amount of earth, six sensitive plants were taken at noon to the bottom of a coal mine, 650 feet below the surface. The leaves and petioles of all six plants immediately assumed their night-time position, not waiting for the sun to set. The area where the plants were placed was lighted with regular incandescent bulbs.

This suggests that the day-night responses of the plants react to some form of radiation capable of penetrating the building material surrounding the 'dark' closet at the surface of the earth, but not to the bottom of a coal mine, 650 feet down".

Thus it is apparent that all life on Earth is attuned and to a greater extent dependent on natural radiation of all wavelengths, and at the same time is harmed in varying degrees by "unnatural" or man-made radiation. Recent epidemiological and laboratory studies, worldwide, have revealed that radiation such as from microwave communications, power transmission lines, video display terminals, radio frequency welding machines, and so on, is a distinct danger, greatly increasing the risk of miscarriages, birth defects, neurological impairments, circulatory problems, cancer and leukemia in animals and humans. Farm animals kept in the proximity of overhead power transmission lines have been observed to be affected, particularly in respect to aborted pregnancies and birth defects.

Involved in these studies, Professor Ross Adey of Loma Linda, California, says there is evidence that electrical fields from power lines can modify the activity of enzymes and other cellular mechanisms in the body. Dr Robert Becker of New York thinks radiation affects the pineal gland, which in turn influences the pituitary, thyroid and adrenal glands, so affecting hormonal balance and the entire function of the body at cell level. Thus unnatural forms of radiation increased the risk of all kinds of defects, including cancer.

The latest bulletin from John Ott describes his recent observation that long-chain clumping (rouleau) of human red blood cells occurs in five minutes when a blood sample is placed directly in front of a video display terminal. When the sample is removed and directly exposed to low-level ultraviolet light for another five minutes, the cell rouleau breaks up and blood structure returns to normal. This experiment is described in *The International Journal for Biosocial Research*, July 1985 (Tacoma, Washington).

On the subject of the ultraviolet wavelengths of light, it should be noted that ordinary glass effectively shields ultraviolet. Thus, even in a sunny climate, people who wear glasses or contact lenses will not receive this wavelength in their eyes. Car windshields and ordinary windows have this shielding effect. It is possible to get glasses and contact lenses of special material which does not shield out ultraviolet. I wonder how many hyperactive people wear glasses in addition to eating the wrong things?

Dr Leo Wade, Vice President and Deputy Director of the Sloan Kettering Institute in 1971 said:

" . . . increasing interest has been manifest regarding the pineal gland. Although this is solidly encased in the skull, it responds to some way to light. The gland seems to have an as yet undefined role in the control of the endocrine glands, some of which are known to affect the progress of neoplastic (cancer) disease. More questions are posed than answers provided by the present knowledge of this gland".



## CHAPTER NINETEEN

# THE IMMUNE SYSTEM

*A Jew took his small son to watch a boxing match. Just before the match began, one of the boxers crossed himself. "Why did he do that?" asked the boy. "He's a Catholic", said the father, "and he has just said a prayer".*  
*"Will it help him to win?" asked the boy.*  
*"Not if he can't fight, " said the Jew.*

This chapter is included to throw more light on why humans suffer from all manner of diseases when animals in their wild state do not, why epidemics such as influenza, herpes, chlamydia and AIDS are becoming more common, and to help the reader more easily understand the later chapters describing cancer, MS and arthritis. The subject is very involved and the description which follows is, therefore, much simplified although adequate for our purpose.

The immune system is the name given to the complex organization of glands, white cells (leucocytes), antibodies, and other protein substances, hormones, enzymes and bacteria which protect the body against potentially harmful germs, viruses and foreign substances which may gain access to it. Such intruders, inert or alive, are called antigens.

An antigen may be any germ or virus, undigested protein, mineral particle or poisonous substance. Apart from antigens, a challenge to the body's wellbeing such as trauma of any kind, or stress--physical or emotional--will stimulate the immune system, whereupon standby white cells are released into the circulation. Even brief bursts of physical activity have the effect of increasing the white blood cell count.

Apart from maintaining a constant state of warfare against intruders, the immune system as a normal activity will destroy cells of its own body if they become defective and no longer of any use. Red cells of the blood wear out after a period variously estimated at from six to 17 weeks and are continually being replaced, and it is the ordinary job of the white cells to destroy the red cells as they become defective. Millions are destroyed and replaced every minute. In a similar fashion, if normal body cells become cancerous or virus infected, the immune system when working properly, will recognize they are defective and destroy them too.

White cells are called leucocytes. There are many kinds of leucocytes, mobile living cells which originate in the bone marrow and migrate to inhabit every tissue and fluid of the body in great numbers. Some are very mobile, able to proceed quickly in the body fluids to wherever they may be needed, and some remain more or less stationary in the tissues. They work in different ways, co-operating together to destroy anything dangerous or potentially dangerous.

Phagocytes are white cells which destroy antigens by consuming and digesting them. Large phagocytes called macrophages consume defective body cells as well as antigens from outside the body. Neutrophils are the most numerous of the mobile phagocytes and are primarily concerned in the defense against invading germs or viruses.

Patrolling constantly in the blood and lymph fluid are the lymphocytes, of which there are two main

types, B lymphocytes and T lymphocytes. The prime function of B cells is to provide specific immune action against specific antigens, in other words to give any single antigen "individualised attention". B cells do this by manufacturing specific antibodies, protein substances capable of immobilising an antigen or marking it ready for destruction by other white cells. Designed only for the one specific antigen, for instance a certain strain of virus, those particular antibodies will act only against that virus and against no other. Thus the B cells, as and when a new antigen appears, will manufacture a specific antibody for it alone. Depending upon the degree of attack and rate of proliferation by an invading organism, the B cells themselves multiply rapidly and increase the production of antibodies to meet the challenge. When an invader has been destroyed, the cell population returns to normal, and some of the antibodies are retained in case of another encounter, in which case the antigen will be despatched before it can get started. Thus the body is immune to that specific antigen thereafter. This is called specific immunity.

T lymphocytes are cells which have matured in the thymus and perform differently to B lymphocytes. T cells are mainly involved in the elimination of various defective body cells which are known as target cells. As with antibodies, different T cells are specific to react against specific antigens, and when necessary will proliferate in great numbers of the particular T cell type required. T cells are extremely complex and from them develop other special cells--killer cells, helper cells and suppressor cells. Killer cells destroy target cells by puncturing them or injecting them with lymphotoxin, and helper cells assist in the production of antibodies by the B cells. Suppressor cells act in the opposite fashion to helper cells and monitor the proceedings to reduce activity as required.

Not all lymphocytes circulate in the lymph and blood. The majority of them remain in reserve in the many nodes and glands of the lymphatic system, as well as the thymus, spleen and numerous other locations such as the tonsils and appendix.

Natural killer cells are cells unrelated to other white cells except for their origin in the bone marrow, and function independently and nonspecifically to attack and destroy target cells of any kind.

Thus there are two kinds of immune response by the body: the general response against all antigens, and the specific response against each individual antigen, with the specific system providing ongoing immunity against the recurrence of the numerous antigens encountered one by one throughout life.

Inflammation and fever are yet another function of the immune response and may occur locally at an area of infection or as the increased temperature of the entire body. As explained in the chapter on enzymes, enzyme activity is greatest at fever temperatures, increasing the metabolic rate of the body 50% at 41°C (106°F) and so the fever which accompanies acute infection is an indication of good immune response.

Often accompanying infection is swelling and soreness of the lymph glands nearest the seat of infection, indicating that the infecting agent has been arrested from spreading past that point. Pus and mucus are the remains of destroyed tissue, dead germs and white cells at the site of an infection.

Without the protection of the immune system, death from any number of infections would be swift and certain. At the beginning of life, when a baby's immune system is still being developed, immune protection is provided by substances in the mother's milk, which is one of many reasons a baby should be breast-fed.

Because in the first year of life the immune system and the digestive system are still developing, the feeding of certain foods such as cereals, eggs, pasteurized milk etc, to a baby may cause permanent allergies. This is because undigested food particles which enter the bloodstream confuse the developing immune system which accepts them as normal in the body. Thus, in later life, should poor digestion again permit the entry of undigested particles of the same food substances into the bloodstream, instead of being digested by enzymes and white cells, the substances may be ignored by the immune system and circulate to cause allergy reactions.

As life progresses, people encounter various infections one by one and develop immunity to each of them.

The capability of the immune system depends upon the general state of health and physical fitness, but regardless of this, immunocompetence may be drastically reduced in a healthy body by fatigue or excessive stress.

The condition of the bloodstream is very important. When toxemia exists, and fat in the blood sticks red cells and platelets together increasing blood viscosity and decreasing oxygen levels, nothing can work properly--the white cells, the thymus and other vital organs, nor any other component of the immune system. Improvement in blood condition rapidly restores the immune function, and it is significant that patients who adopt a properly constituted diet soon notice they no longer "catch" head colds. The dietary substances most inhibitory to the immune system are fat, cholesterol and excess protein, all of which are commonly consumed in excessive quantities.

Various chronic diseases and the diminished vitality accompanying them are invariably marked by low body temperature, low enzyme levels and low immunocompetence. Thus senile and chronically ill people succumb more readily to acute infection.

In particular, the level of immunocompetence depends on a healthy thymus, which in concert with the other endocrine glands, directs the immune system "orchestra". As health fails or excessive demand is made on the immune system by way of infection or trauma of any kind, the production of thymus hormones decreases and the thymus becomes exhausted and shrinks in size. Other depressants of the immune system are drugs, such as nicotine, alcohol, tranquilizers, antibiotics, painkillers, aspirin, etc. and various chemicals such as fluoride and chlorine which are widely used added to city water supplies.

Vitamin C is important for the proper function of the immune system, and the generally inadequate intake of this vitamin in civilized populations is one reason for the low standard of immunocompetence displayed by most people. In the presence of stress or any of the depressants mentioned, the requirement for Vitamin C is increased enormously (see Chapter 15).

Because of the generally poor standard of immunocompetence in modern society, the antibiotic drugs, so effective at killing germs, have assumed enormous importance in medicine, but whereas a healthy immune system eliminates germs and viruses with equal dispatch, antibiotics have no effect at all on viruses, which is why herpes and the common cold cannot be "cured". It has become apparent in recent years that the indiscriminate use of antibiotics is damaging to the immune system to the extent of being one of the major factors in AIDS.

## **Immunization**

Among their many unique qualities as intelligent beings, humans possess ego, sometimes in amazing amounts. It is written in the bible that God created man in his own image, and many men not only accept this but at the same time fancy they possess God's wisdom as well. With little thought of the future, man presumptuously meddles with Nature, and in the last hundred years or so has already almost destroyed planet Earth.

In the field of medicine, man zealously "improves" on Nature in many bizarre ways. Immunization is one of them. With the simple confidence of a child poking at the innards of a color television set with a screwdriver, doctors, with the best of intentions presume to improve upon Nature's masterpiece, the immune system.

The dramatic demonstration of immunization of animals against various microbes over a hundred years ago by Louis Pasteur impressed the majority of the world's leading doctors so much that the germ theory of disease, previously ridiculed, became generally accepted overnight and since then has dominated medical thought. Although Pasteur himself, not long before he died, realized the basic error of the germ theory, it was too late--the theory was established, set like concrete for a hundred years.

The theory sounded good, and it was believed that when eventually a vaccine had been found for every disease, humans could become disease-free thereafter. The dream never eventuated, but the advent of the

"wonder drugs" like penicillin and antibiotics appeared for a while to provide the missing answers and most people continued to believe that the key to health lay in the destruction of germs and viruses.

The idea of medical immunization is to artificially provide specific immunity against different disease microbes by injecting a vaccine made from the microbe, rendered harmless, but still capable of exciting sufficient specific response to produce enough antibodies to provide immunity.

This, of course, does happen, but at the same time very often complications occur which may be very dangerous. It is evident that over the years more suffering and deaths have eventuated from immunization that would have occurred without it.

Since Edward Jenner of England in 1796 demonstrated the use of cowpox vaccine against smallpox, vaccinations against smallpox were started. Despite this, a smallpox epidemic swept England in 1839 and killed 22,081 people. The Government in 1853 made smallpox vaccinations compulsory, but the incidence of the disease kept increasing, and in 1872 another epidemic killed 44,840 people, most of whom were vaccinated. The compulsory vaccination law was abolished in 1948. Similar disasters occurred in Germany and Japan but possibly the worst was in the Philippines in 1918 when the US Government forced over three million natives to be vaccinated. Of these, 47,369 came down with smallpox and 16,477 died. In 1919 the program was doubled, and over seven million were vaccinated, of whom 65,180 came down with the disease, and 44,408 died. The epidemic was a direct result of the vaccination program. These facts are described by Dr William F. Koch in his book, *The Survival Factor in Neoplastic and Viral Disease* (1961). Dr Koch further described the disastrous increase in polio incidence in the USA and Canada following the mass inoculation campaign against polio in 1958. The highest increase was 700% in Ottawa, Canada. Dr Robert Mendelsohn in his book, *Confessions of a Medical Heretic*, questions the safety of all immunizations, including diphtheria and whooping cough, in a chapter titled, "If this is Preventive medicine, I'll take my chances with Disease!".

## **Immunotherapy**

Immunotherapy is attempting to influence the course of a disease by artificial manipulation of the immune system after the disease has become established. Vaccines made from blood samples, urine etc. have been used against a number of diseases an endeavor to stimulate a specific immune response, as well as various other vaccines designed to stimulate the nonspecific response. Results have always been disappointing, and this is no wonder. Failure of immunotherapy is inevitable, because it is designed to stimulate artificially something which is exhausted. The solution is simple--forget about the immune system, forget about the tumor, headache, or what-have-you, and set about to restore the general health with diet, rest, relaxation, sunshine and exercise. The immune system will thereupon regenerate along with the rest of the body, thankful to be free of medical "help".

## **In Summary**

1. The capability of the immune system, when functioning properly, is far greater than generally imagined.
2. The general level of health in civilized society is marginal, and therefore so too is the general level of immunocompetence.
3. This accounts for the generally accepted high incidence of all kinds of infections, particularly influenza, and the increase in VD, herpes TB, hepatitis, candida and so on. Further deterioration of immuno' competence leads of course to what is known as Chronic Fatigue Syndrome, and eventually, among regular users of drugs and antibiotics, to AIDS (Acquired Immune Deficiency Syndrome).
4. Also associated with marginal health and poor immunocompetence is the relentless increase in cancer.
5. The immune system cannot be artificially boosted--all it needs is a supply of decent blood with plenty of oxygen in a body free of stress and it soon regenerates of its own accord.





## CHAPTER TWENTY

# CANCER--A DISEASE OF CIVILIZATION

*"The major cancers of our time are diet-caused, mainly by fat and cholesterol."*

Dr Ernst Wynder, American Health Foundation, addressing the US Senate Select Committee on Nutrition and Human Needs

Cancer is a state of cellular growth which occurs when some normal cells of a plant or an animal become abnormal and continue to grow abnormally. It is characterized by the ability of the abnormal cells to subdivide and grow outside of the constraints which automatically limit the subdivision and growth of normal cells. It is uncommon in nature. It does not occur in properly nourished and vigorously healthy humans.

Cancer, in the many forms we know it, is a disease of civilization, and is practically unknown among primitive people properly nourished on a simple natural diet. Whether such people live in the Arctic or in Africa, and whether they eat fish and whale meat, or mashed corn and bananas, cancer as it afflicts our society, is unknown. The book *Cancer--a Disease of Civilization* by Vilhjalmur Stephansson, describes studies of Eskimos\* in the late 1800s and early 1900's specifically looking for cancer among them, and how not one case could be found. The only Eskimos to ever develop cancer were those who came to live in white man's settlements and who adopted white man's dietary and other living habits. Similar observations have been made by doctors in other primitive natural areas of the world.

\*The name Eskimo is derived from a Cree Indian expression meaning "he eats meat raw". Although the primitive Eskimo diet comprised mainly animal protein and fat, most of it was consumed raw, thus providing enzymes favorable for the more efficient metabolism of these substances, as previously described, The Eskimo had no refined foods at all, and did not use salt. In addition, the large amounts of eicosapentaenoic acid (EPA) contained in the diet ensured a non-sticky, free-flowing bloodstream. At the same time, the Eskimos' life was simple and stress-free and they got plenty of outdoor exercise.

In his book *The Cradle of the World and Cancer--A Disease of Civilization* (1927), Dr E.H. Tipper said: "Cancer has been suspected of being a disease of civilization. judging from my experience in general practice in London, twenty years in West Africa, and again in rural England, I am convinced that this is true. It is due to the conventionalism and bad feeding of civilization, and is an exact index of the degree to which the alimentary tract has deviated from its natural and normal state of health". And referring to the practice of natives eating only natural foods he said: "There is no such thing as constipation--there is no cancer. At the first dawn of civilization amongst them this disease makes its appearance; where civilization is advanced it is rife".

Dr Roger Williams in 1898, writing in *Lancet*, blamed environmental factors of the alarming increase in cancer during the preceding 50 years, and noted the death rate in England had increased from 17 per 10,000 per year to 88. Dr Williams attributed the increase to the fact that meat consumption had doubled, and he advocated eating more vegetables and getting more fresh air and exercise. However, since then the very opposite to Dr Williams' advice has been adopted, and accordingly, cancer as a cause of death is now second only to cardiovascular disease, and continues to increase.

The most common form of cancer in affluent Western countries is cancer of the bowel which includes

cancer of the colon and rectum. The third National Cancer Survey by the US National Cancer Institute showed that this form of cancer now causes more deaths than any other. Previously, breast cancer caused more deaths among women, and lung cancer among men. The incidence of cancer is much lower among vegetarians, particularly those who consume no dairy products.

Cancer growths are called tumors or neoplasms and may occur in many different forms and in different parts of the body. Arising from cells in originally normal tissue, the initial growth is called a primary tumor. Primary tumors usually occur in tissues which in their day-to-day function have a constant wearing out and renewal of cells--tissues such as the skin and the lining of the digestive tract, the respiratory tract and the female genital canal. Primary tumors also occur at locations in which there is cell renewal due to irritation or injury. Primary cancer rarely occurs in muscle or nerve tissue in which tissue the cells do not normally subdivide and renew, but these tissues are capable of supporting the growth of secondary tumors originating from stray cancer cells from a primary cancer elsewhere.

Although they vary greatly in appearance and function, all cells of the body are basically the same, having developed from the same primitive cells of the early developing fetus after conception. Having developed into different specialized cells of the various body tissues, they are said to be differentiated. To become cancer cells, normal cells change in degrees to a primitive form capable of the unrestrained reproduction characteristic of primitive undifferentiated cells. The degree to which cells become de-differentiated determines the degree of malignancy of the cancer. If a tumor is composed of cells which are only slightly abnormal and grow slowly with near-normal cell division without spreading, it is considered benign, presenting no immediate threat to life.

Tumors consist both of cancer cells and cells which are apparently normal, the latter sometimes making up 90% of the total, as if the body was attempting to contain the cancer cells by surrounding them with normal cells. Malignant cells frequently detach from the primary tumor and circulate in the lymph and bloodstream. Usually they are apprehended in the lymph nodes adjacent to the primary tumor and destroyed by the white cells. However, in cancer patients the immune system is defective in varying degrees, and the migrating cancer cells may not only survive in the lymph nodes, but proceed further to colonize elsewhere in the body as a secondary tumor. This process is called metastasis.

Few people die from the primary tumor, but once the cancer has metastasized the condition is usually regarded in orthodox circles as "terminal".

When cancer grows or metastasizes, it does not "infect" adjacent cells but grows as an entity, still reproducing abnormal cells the same as itself. For instance, if breast cancer metastasizes to the lung, the secondary tumor in the lung will be composed of cancerous breast cells.

Whereas in the past, malignancy has been considered as a virtual death sentence, this is no longer the case. Many people have recovered naturally from "terminal" cancer and there now is sufficient knowledge of cancer to help others do the same. (See Spontaneous Remission of Cancer.) With this knowledge the complete avoidance of cancer is simple and easy.

Some body organs such as the liver and the adrenal gland, having been substantially damaged, can regenerate to almost full capacity. Nerve cells and muscle cells, when destroyed, do not regenerate, but nor do they commonly become cancerous.

A medical definition of cancer which may assist the reader's understanding and acceptance of the detailed explanation which then follows is given by Professor Otto Neunhoffer of Hamburg, Germany:

"The malignant disease is a syndrome characterizing results arising from abnormal biochemical reactions, which if not interrupted or reversed, result in a tumor, which then in itself becomes a very active source for abnormal primary reactions, thus accelerating the entire process.

"It is an accepted fact that a malignant tumor develops only after an average eight-year period of pre-cancer. To understand this preliminary period when the condition actually existed, even though undetected, it is necessary to distinguish between biochemically malignant disease, and a malignant

tumor."

Whereas cancer patients usually die of cachexia, which is the wasting away of the body as its vital processes progressively fail, and whereas it is clear that the growth of diseased cells is only part of this degenerative process, it is obvious that the prevention and reversal of the disease depend not upon destruction of cancer cells with vicious medical procedures, but in correcting the underlying defects in body chemistry which initiated the whole process in the first place.

## **How cancer starts**

The general medical viewpoint of cancer being a cellular upset initiated by some quirk of nature, and localized somewhere within an otherwise healthy body, is absolutely untenable to anyone possessing an enquiring mind and reasonable power of observation. Based solely on the existence of the localized symptom (ie. the cancer growth) and completely inconsistent with most of the known facts, this viewpoint, as a basis for cancer treatment and research, has prevented and continues to prevent any chance of solution to the cancer problem.

Although the "novel" concept of cancer being a constitutional disease primarily of dietary origin has been in existence at least since 1809 when Dr Richard Lambe of London wrote a treatise on the cure of cancer using a diet of raw fruit and vegetables, only recently has the cancer "establishment" started to seriously investigate this possibility, having in the past ruthlessly suppressed such notions and all those who held them.

Among the many independent physicians who over the years have used dietary methods in researching and treating cancer, are four of the 20th Century's greatest men of medicine, selected here because their descriptions of the cancer process most adequately explain the subject.

1. Dr Otto Warburg, double Nobel Prize winner and Director of the Max Planck Institute of Cell Physiology, Germany. The holder of many international honors, Dr Warburg was considered by Dr Dean Burk, head of the National Cancer Institute at the time, to be the world's greatest bio-chemist.
2. Dr Max Gerson, of Germany, friend and confidant of Dr Albert Schweitzer, who described Gerson as a medical genius.
3. Dr William F. Koch of USA, BA, MA, PhD, MD, described by Dr Willard Dow, founder of the Dow Chemical Company, to be the greatest bio-chemist of his time and so far ahead of his contemporaries they could not understand him.:

Compassionate men and competent authors, typically "ahead of their time", these doctors between them had over 200 years experience in researching and successfully treating cancer in all its stages.

Because the opinions of these great doctors on the causes of cancer essentially agree, and because their achieved successes prove their common theory in the absence of any other tenable hypothesis, the explanation which follows is a composite of their theories and observations.

## **The cancer milieu**

Although individually only a tiny component of the body, every single cell is a living organism in its own right, and needs to be constantly supplied with nutrients, fuel and oxygen, at the same time needing to be cleansed and its waste products to be removed. Responsible for this care is the extracellular fluid (lymph) surrounding the cell which derives from the bloodstream and is continually changing. The quality of this fluid is, of course, dependent on the quality of the blood which is in turn dependent on the quality of the diet and the efficiency of the liver. Not only must the liver supply the bloodstream with the proper nutrients, it must at the same time keep it as free as possible from toxins.

The Western diet and other civilized indiscretions result in a toxic, fat-clogged bloodstream and eventual liver impairment, responsible for the deterioration of the cellular environment to that known as the "cancer

milieu".

## Oxygen

In 1947 Dr F. Windesch of Germany demonstrated that by intermittent withholding of oxygen, normal body cells could be changed into cancer cells. This discovery was confirmed in 1953 by Drs Goldblatt and Cameron (*Experimental Medicine*, 97, 525, 1953).

Dr Otto Warburg, the Director of the Max Planck Institute of Cell Physiology, in Germany, stated in 1955 that a lifetime of research had convinced him that cancer was caused by oxygen deprivation to the cells.

Dr H.A. Schweigart, another German, found that cancerous tissue always is depleted in oxygen.

Dr W. Spencer Way of Florida, writing on the importance of oxygen (*Journal of the American Association of Physicians*, December, 1951) said: "This confirms the finding of Fischer who kept cancerous mice under a pressure of two atmospheres for 14 hours and cured their cancer. If agents acting as catalyzers were used, the results were even better".

## The role of blood viscosity and circulation

As described in Chapter 11, the degree of viscosity of the bloodstream is a key factor in all disease, more so than ever with cancer. Apart from anything else, the freedom of the blood to flow is a crucial factor alone. As we have seen, the degree of freedom to flow is determined mainly by the viscosity of the blood.

The connection between high blood viscosity and poor oxygen supply with cancer is clear. Referring again to Dr Dinténfas' paper on blood viscosity:

"Wardle in 1967 suggested that it is the increased blood viscosity in the small digital arteries which is responsible for the common symptom of malignancy. Red cell aggregation, platelet aggregation and hypercoagulability can contribute to this syndrome. Crenated red cells, raised fibrinogen, increased platelet stickiness are all common features of malignancy."

It is commonly known that the ESR (red cell sedimentation rate, see Chapter 10) of cancer patients is always high. Dr Melvin Knisely stated in 1947:

"Thus far, completely unagglutinated blood has been found only in strictly healthy animals and men. No severely ill person has yet been seen who did not have intravascular agglutination of the blood and visibly pathologic vessel walls." (From the paper, "Sludged Blood," by Melvin H. Knisely, Edward H. Bloch, Theodore S. Eliot and Louise Warner, Hall Laboratory of Anatomy, University of Chicago, Department of Zoophysiology, University of Copenhagen, and Departments of Anatomy and Preventive Medicine, University of Tennessee, *Science*, Nov 7, 1947.)

It appears that in tissues provided with reasonable circulation, primary cancer does not readily occur, and furthermore, should it have already started, there will be no metastasis in tissues where free circulation is maintained. The following extracts from Dr Leopold Dinténfas' book, *Rheology of Blood in Diagnostic and Preventive Medicine* (1976) explain why:

"Olwyn (1971) in his editorial, reviewed the effect of anticoagulants on tumor metastasis and noted that a number of investigators found a significant protection from metastasis by the application of heparin, plasmin, warfarin or decoumarol. In an informal survey of 200 patients with a history of myocardial infarction or cerebral arterial insufficiency, receiving heparin daily or every second day for periods of two to 22 years, Griffith (1971) found no instance of malignant tumor. Michaels (1971), who reviewed 540 patients on oral anticoagulant therapy for thromboembolic disorders) found presence of metastasis reduced eightfold against statistical expectation."

A similar study by Dr Bjorn Stinkvist, University Hospital, Upsala, Sweden, on women maintained on digitalis for cardiac problems, showed that spreading breast cancer was only one-tenth of the rate experienced by women not on digitalis, and even when it occurred the cancer was less aggressive.

Impairment of free circulation can also be caused mechanically by tight clothing or plain inactivity. In a number of cases tight-fitting brassieres have been suspected as a factor in breast cancer, particularly in overweight women.

## **Pre-cancer and de-differentiation**

Normal body cells will degenerate if for some reason their oxygen respiration is impaired, and if the impairment is severe enough, of course they will die. As their respiration becomes reduced, the cells, in an effort to survive, gradually change over to a process of fermentation for their energy needs. This is an inefficient process, but capable of sustaining life. Lactic acid is produced as a byproduct instead of carbon dioxide.

As the changeover progresses, the cells in stages come to resemble primitive forms similar to embryonic cells, although still identifiable with the tissue of their origin. This change is called de-differentiation.

According to the degree of de-differentiation, the cells look and behave less and less like normal cells and more and more like primitive cells--capable of subdivision and growth outside of normal body control. Such unrestrained growth is cancer, and as there are varying degrees of de-differentiation, so there are varying degrees of cancer. In other words, the degree of malignancy (ie. uncontrollability and rate of growth) is proportional to the degree of de-differentiation and fermentation.

It is significant that in pre-cancerous tissue, the process of unrestrained growth does not seem to commence until triggered by the call for new cell growth in a location where some form of irritation or injury has occurred. Because of this, the belief has widely been held that cancer can be caused simply by irritation or injury.

And because the mere restoration of plentiful oxygen does not alone return cancer cells to normal, another widely held belief is that the process of de-differentiation is irreversible, and this would indeed be the case if cancer was caused by a mutation as is commonly believed. Contrary to this belief, Dr Koch always held that if the correct chemistry was provided, it was possible for the cells' respiratory cycle to be restored.

Another interesting fact is that in all body cells, even those of a newborn baby, there exists a virus-like organism which always multiplies in conditions of disease. This proliferation occurs as a natural event, and so numerous do these organisms become in pre-cancerous cells and cancer cells that at one time it was generally believed that they were the actual cause of cancer. The virus theory of cancer is still believed by some researchers, who have unsuccessfully attempted for years to produce a vaccine against them.

As cancer growth increases, so too do the levels of lactic acid and other toxic wastes which further worsen the cancer milieu so that a vicious circle ensues. The cancer, relying on fermentation for energy (fermentation is only one-fifteenth as efficient as respiration) demands more nutritional sustenance than the body can afford, and so the body, overloaded with toxins, wastes away. This is cachexia, which leads to death, usually by pneumonia or heart failure.

The local swelling which occurs with cancer is enhanced due to the fact that cancer cells contain up to 90% of their mass as water compared to 66% for normal cells, according to Dr Raymond Damadian, the inventor of the FONAR\* diagnostic scanner. The increased water is due to the high levels of sodium in the cells.

\*FONAR is an electronic scanner which can detect cancer cells by interpreting their differently structured water content. The name FONAR is derived from the words, Field Focussing Nuclear Magnetic Resonance. FONAR is expected to replace the currently used CAT scanner and is described in the *Journal of the American Medical Association* (January 8, 1982) as characterizing "a new wave of medicine"

Whereas it has been demonstrated in the laboratory that the intermittent withholding of oxygen from a cell can alone cause it to become cancerous, this condition does not appear to occur in the body to the extent of, by itself, causing cancer. Although high blood viscosity, reduced circulation and low oxygen supply are always involved, further nutritional or chemical impairment to the oxygen respiratory cycle within the cell is necessary. In fact, the latter influence alone, if pronounced enough, can initiate the cancer process even if adequate oxygen is available to the cell. In this case the cell is deprived of oxygen because it is deprived of the enzymes necessary to use the oxygen. This depends on nutritional factors, the presence of carcinogens, and the state of the vital organs, the liver in particular.

Dr Warburg considered the breakdown of cell respiration to be due primarily to the absence of what he called "active respiratory substances" inadequately supplied in the diet, and to a lesser extent, poor oxygen supply in the circulation. He thought in some cases carcinogens were implicated by their effect of inhibiting the action of the active respiratory substances. The active respiratory substances included iron salts Riboflavin (Vitamin B2), Thiamin (Vitamin B1) Pantothenic Acid, Nicotinamide and Cobalamin (Vitamin B12).

Dr Koch said that clinical observations disclosed the persistence of toxemia over a period of as long as twenty years previous to the advent of the growth. The eventual breakdown in the cells' respiratory cycle occurred when various toxic amines deactivated the key respiratory component of the cell called the "functional carbonyl group (FCG)". Oxygen transport from the blood was reduced by poor circulation and gellation of tissue colloids, he said, but this alone, without the deactivation of the FCG was not sufficient to cause cancer. Evidence of subsequent fermentation was the large elimination of lactic acid even when the lungs were well ventilated (from the *Survival Factor in Neoplastic and Viral Disease* --William F. Koch MD).

Dr Gerson divided the cancer process into two components, the general component and the local component. "The general component," he said, "comprises mainly of the deterioration of the essential organs of the digestive tract, chiefly the liver. There the damage is done by a permanent daily poisoning brought about by our modern civilization". The subsequent change in cells from normal to embryonic form, using fermentation--ie. the local component--he ascribed to an inadequacy of oxidizing enzymes and the presence in the cell of sodium excess and potassium shortage.

Dr Moerman observed that cancer only appeared in tissues that were chronically sick, and said, "In perfectly sound tissues cancer has never yet, to my knowledge, come into being". He said the factor which finally caused the breakdown in cell respiration was injury to the oxygenating power of the cell due to the absence of nutritional substances such as Vitamins A, B complex, C and E, together with citric acid, iron, iodine, sulphur and others, together with an adverse sodium-potassium ratio. Dr Moerman said, "It is no longer a theory that cancer is a disease of the body as a whole, it has been incontestably proved. Each cancer patient shows a great number of clinical symptoms which have not been proved to be a consequence of the local tumor, but have been proved to be caused by an abnormal metabolism. To support this opinion I need only to point out the increasing emaciation of the body, which symptom we call cachexy, followed by death. We all know that this emaciation followed by death, occurs repeatedly, whereas on examination it appears that the cancer tumor is no larger than a chicken's egg. It is a fact the emaciation, followed death can never be explained by this tumor somewhere in the body; it can be explained by an abnormal condition of the metabolism. The cancer patient definitely does not die from the tumor in such a case, he dies from the disease of the body as a whole. This disease--and not the tumor exclusively--is cancer.

"The symptoms that occur with cancer--namely general symptoms, cachexy, multiplication of the virus and the mortal growth of the tumor tissue--are results of disturbed metabolism." (From *A Solution to the Cancer Problem* --Cornelius Moerman, MD.)

The "disturbed metabolism" (ie. the cancer milieu) referred to by Dr Moerman, is capable of causing varying degrees of cell de-differentiation but apparently not always to the extent of causing actual cancer--maybe benign tumor growth but not a malignant one. Malignancy requires a greater degree of de-differentiation, and this is where tissue irritation or injury comes in:

When normal healthy tissue is injured, before healing growth can commence the cells in the injured area must first de-differentiate into near embryonic form in order to multiply rapidly. When the healing is complete, the cells become differentiated again and growth ceases. In pre-cancerous tissue, however, containing cells *already partially de-differentiated*, the further de-differentiation called for by the attempted healing at the site of irritation or injury *may be sufficient to convert some of the cells into cancer cells*.

An illustration of this process is supplied by laboratory experiments in which the powerful carcinogen, coal tar, is applied to patches of skin on mice in order to produce cancer. In properly fed and exercised (ie. very healthy) mice, cancer does not eventuate, but in "normal" laboratory mice cancer usually appears after varying lengths of time. However, if before the appearance of the anticipated cancer, injury such as a cut\* is caused in tissue remote from the patch of coal tar, cancer will appear not where the coal tar is, but at the site of the injury. This was demonstrated over sixty years ago by Dr H.T. Deelman of Groningen, Germany. Before that, in 1925, in the *Journal of Experimental Medicine*, Drs Murphy and Sturm reported: "It has not been an unusual observation in our experience that mice, failing to develop skin cancer as the result of the application of tar, are found to have tumors of the lungs".

\*See *Medical treatment of cancer*, danger of biopsy and surgery.

This shows clearly that the coal tar causes cancer essentially by its poisoning effect of the bloodstream and subsequent breakdown of the body's detoxifying capability, and that the local irritation at the site of the patch of coal tar is only a secondary cause.

In humans the breakdown of the body's detoxifying capability may take many years, with the gradual deterioration of the liver, kidneys, and other vital organs, depending on the nature of the abuse they have been subjected to.

It is held by most authorities that the process of cell de-differentiation is irreversible, and for the conventionally held mutation theory to be true this would have to be the case. However, Dr Koch long ago demonstrated how the oxygen respiration cycle could be restored in some cases and the cancer cells returned to normal. More recently, reversions of cancer cells to normal have been again reported and are described in the report of the National Research Council, titled, *Diet, Nutrition and Cancer* (1982). In one of the cases, cultured cells reverted to normal after the application of ascorbic acid, and in another, cancer cells reverted to normal of their own accord when, in an experiment, they were relocated to their location of origin in the body. One of the leaders in this sort of research is Dr Leo Sachs of Israel, who reported to the 13th International Cancer Congress in Seattle in 1982 how he had changed leukemia cells and sarcoma cells in laboratory animals back to normal differentiated cells, either by the injection of certain protein substances or by agents which caused the cell to produce these substances.

Epithelial tissues such as the skin and lining of the digestive tract etc., which in a normal healthy body are being constantly renewed by continuous replication of cells and at the same time are exposed to varying degrees of irritation,\* are therefore more prone to cancer. For this reason, cancer of the skin and at various locations along the digestive tract and respiratory system are by far the most common and account for the majority of cancer deaths. Cells capable of rapid growth when influenced by certain hormones, such as cells of the female breast, are also more prone in some circumstances to cancer. The most common stimulus to such cell growth is the excessive production of estrogen which occurs on a high fat diet. Such cancers are known as hormone-dependent cancers, but in all cases of common cancers, however, it can be shown that poor blood and reduced circulation are the primary factors.

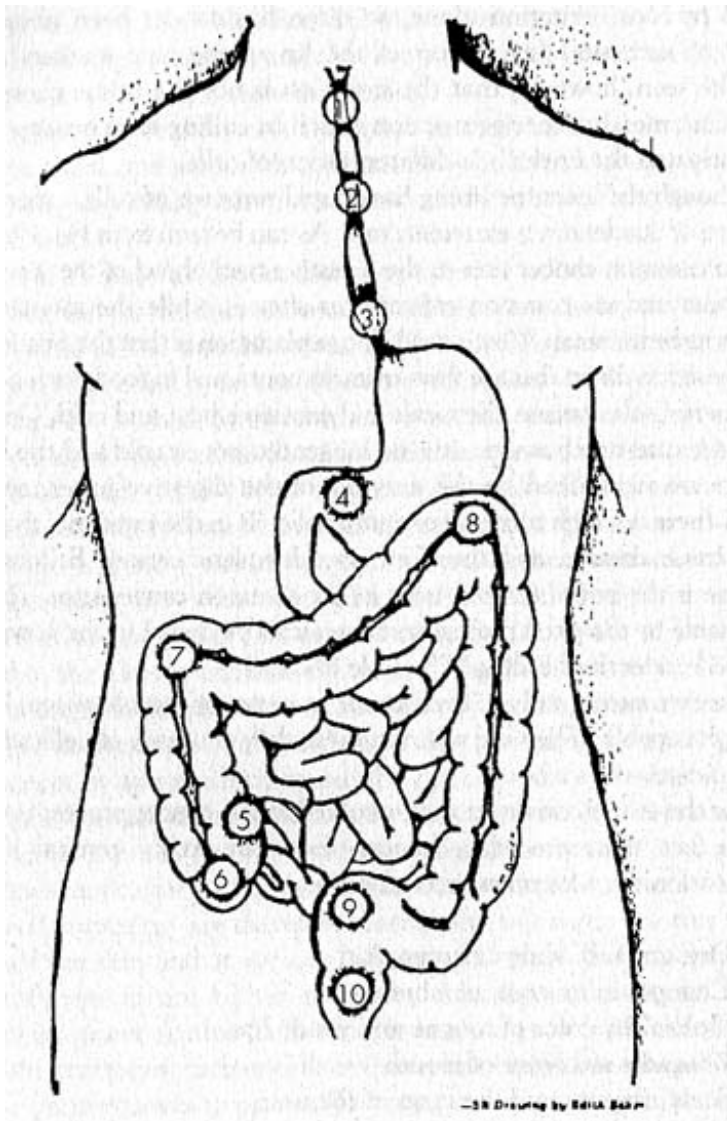
\*Irritation of the mouth and upper digestive tract, including the stomach, may be caused by highly salted or heavily spiced food, very hot food or drink, and the heavy use of alcohol or smoking. Constant pipe-smoking may irritate the lip, sufficiently to trigger lip cancer. Asbestos dust and cigarette smoke are irritants to the lungs, and talcum powder to the female genital tract. As such these are secondary, not primary, factors in producing cancer.

For many years it has been believed by some doctors that cancer is caused by local irritation alone, so often has cancer been observed to appear at such sites (eg. cancer of the lip among pipe-smokers). It can easily be seen, however, that the irritation is not the prime cause of the cancer but merely the trigger action which by calling for a healing process has instigated the critical de-differentiation of cells.



Although the intestine lining has a rapid turnover of cells, cancer of the intestine or duodenum is extremely rare. As can be seen from Fig. 20.1, there are four common cancer sites in the digestive tract ahead of the intestine or duodenum and six common cancer sites after it, while the intestine itself appears to be immune. Why is this? The explanation is that the first four sites are exposed to direct damage from irritants contained in food, such as spices, condiments, salt, various chemicals and excessive heat and cold. Once food enters the intestine however, it is no longer too hot or cold and the harmful irritants are neutralized by the enzymes of the digestive juices, and even though there is a high turnover of epithelial cells in the intestine, there is no direct tissue damage and therefore no subsequent cancer. Following the intestine is the bowel (colon) with its six common cancer sites. These are explainable by the toxic process and chemicals produced in the bowel itself, described under the heading "The Role of Diet".

Figure 20.1 Common Cancer sites in the intestines



There is strong medical support for the belief that many cancers might be prevented by eliminating chemical irritants from food. Malignant growths of the human digestive tract tend to appear in the "narrows" of that tract where food slows down its passage and rubs against the intestinal linings most forcefully. These "narrows" are shaded spots in, the above sketch, marked with numbers: 1. the larynx; 2. the tracheal bifurcation; 3. the entrance to the cardiac stomach; 4. the pre-pyloric stomach; 5. the ileo-cecal valve; 6. the cecum; 7. the right colonic flexure; 8. the left colonic flexure; 9, the sigmoid colon; and 10. the rectum. Occurrence of cancers at these point is significant when one notes how relatively long are the cancer-free portions of the intestine. (Source: *Natural Food and Farming*, Atlanta, Texas.)

Primary tumors rarely, if ever, occur in nerve or muscle tissue, because although capable of healing

when injured, they are made of cells which do not replicate.

That the entire constitution is involved in the cancer process is evident by the fact that, preceding cancer there are many general signs of degeneration. Dr Moerman listed these as:

- Dry, cracked, scaly or horny skin
- Changes in mucous membranes
- Unhealthy color of tongue and inside lips
- Rhagades at corner of mouth
- Scaly rings around the rings of the nose
- Nails hard and crumbly with line formations
- Hair dry and dead looking
- Signs of edema on inside lower leg
- Low vitality
- Bleeding gums (Vitamin C deficiency)
- Easy bruising (Vitamin C deficiency)
- Slow healing of wounds
- Symptoms of anemia, alkalosis, poor blood
- Poor appetite, loss of weight

Singly, these signs were not pathognomonic of cancer, Dr Moerman said, but in combination they were.

Another sign which often precedes the appearance of cancer, cirrhosis and kidney failure, is body-wide itching. This finding was made after a study of generalized pruritis (itching) in elderly patients by Drs Gary Kantor and Donald Lookinghill of the Milton Hershey Medical Center, Pennsylvania.

Dr R. Stoeger, of Germany, in his book, *To Age--But Without Cancer*, describes his observations of cancer patients which indicated that they previously had displayed low thyroid activity and lowered immune responses. More recently, studies at St John's Naturopathic Center, Portland, Oregon, reported in the *Cancer News Journal*, Vol 15, No 4, Winter, 1981, quote:

"100% of all (cancer) patients had below normal temperatures (96.8-97.8°), but simultaneously with measurable immune response and the patients' increased sense of wellbeing, body temperatures returned to the normal range (98.0-98.6°). And, even more interesting, those patients who continued to improve, stabilized at 98.6°. This included the high percentage of patients who had always had a low temperature. "

These observations fit in with those of Dr Edward Howell that in well established cancer and other chronic disease conditions, enzyme levels and activity in the body were below normal.

Food aversions are yet another sign of cancer. It is common for cancer patients to develop aversions to certain food substances such as meat, chocolate and caffeine, which are known to be cancer causing. Such aversions are obviously a defense reaction by the body. In the book, *Human Nutrition and Dietetics* by Davidson, Passmore, Brock and Truswell, the authors state: "Doctors and dieticians should be constantly aware of the diagnostic significance of loss of weight, anorexia and food aversions as early signs of malignant disease".

Notwithstanding the many general signs which precede the onset of cancer, it is difficult for conventional researchers to recognize the constitutional nature of the disease because they study only the biological process of the disease in its final stage. In their experiments with animals they apply a powerful chemical to the animals and observe cancer appear as a result. To the observer, a single chemical has caused the cancer, even though he knows that dietary factors can influence the onset and course of the disease. The confusion in the medical outlook is unavoidable while cancer is viewed as a local cellular disease. Researchers concentrate on looking only for what Dr Gerson called the local component. They should read Dr Gerson's book which, in referring to experiments on animals shows that whatever chemical assault is necessary to cause cancer in them, the cancer never commences until after the liver has been damaged "together with pathological changes in the kidneys, spleen and lymphatic apparatus". Further enlightenment would follow after reading the description of Dr Gerson's experiment in which he

completely eliminated cancer in a rat simply by interconnecting\* its blood circulation with that of a healthy rat with a fully functioning liver.

\*This is possible with inbred strains of animals which, like identical twins, are fully compatible.

However, the constitutional nature of cancer--a point of medical contention for nearly two hundred years--is gradually being realized in conventional circles. It is now recognized that cancer occurs in stages and references are made in medical reports to conditions of pre-cancer. A fairly recent news item is significant, headed:

"Cancer Detected Before It Begins" (Sydney *Daily Telegraph*, September 2, 1980) "A unique technique detecting the onset of breast cancer before it appears is being developed by a Sydney biophysicist. Dr Veronica James is working at the University of NSW on an x-ray technique to pick up changes in breast tissue which might herald a cancerous tumor. Changes occur in the elastic substance collagen of the breast before even a minute cancer appears, according to Dr James."

It must soon become obvious to everyone that cancer does not suddenly originate from a mutation in the nucleus of a healthy cell.

Once the biological sequence necessary for cancer is complete, and cancer cells have actually formed, cancer growth will still not eventuate if the immune system has reasonable function. Many people live apparently cancer-free because of this protection. Therefore, although not a cause of cancer, failure or partial failure of the immune system is a necessary prerequisite for development of cancer growth.

In his book, *Cancer--The Facts* (Oxford University Press, 1979), Sir Ronald Bodley Scott says: "In the majority of cases there is a preliminary period of vague ill-health rapidly succeeded by a phase in which the symptoms are those of the primary tumor".

Thus the cancerous growth or tumor is really only a symptom of the real disease which is lipotoxemia and the subsequent tissue degeneration and immune system weakness which follow. A world famous cancer specialist, Dr D.W. Smithers in his paper "Cancer, an Attack on Cytologism" (*Lancet*: 493, 1962) said: "overgrowth and de-differentiation (of cells) are effects of disorganization--repercussions, not driving forces. Cancer is no more a disease of cells than a traffic jam is a disease of cars".

## **Metastasis**

Secondary tumors are formed by cells of the primary growth detaching and colonizing elsewhere in the body. As mentioned, most circulating cancer cells do not survive; for such cells to establish as secondary growths they need to be stationary in contact with tissue in a location favorable to them, such as within a blocked vessel or stationary blood clot. As mentioned in *The Role of Blood Viscosity*, metastasis does not occur when the bloodstream is kept free-flowing, either by proper diet or the use of blood thinning drugs. Once established, the growth of secondaries may be comparatively rapid compared to that of the primary tumor and is usually considered, in the orthodox view, as a "terminal" condition.

The more rapid growth of metastasized cancer in some cases may be explained by the fact that, while in their original location cancer cells are still partially responsive to normal growth restraint, while in the distant location there is no restraint. To illustrate this, experiments have shown that it is possible for certain cancer cells to become normal when returned to their original tissue.

One such case is described as follows: "Certain cancers can be produced simply by transplanting cells to novel sites in the body where they can multiply without the usual restraint or by placing them next to inert solid surfaces such as plastic or metal. It seems unlikely that mutation plays any part in these processes, especially since certain of the cancers produced in this way will recover their normal restrained behavior when they are returned to their normal location" (from *Diet, Nutrition and Cancer*, US National Research Council, 1982).

## **Cancer tests**

By the time you have read this chapter, it will be appreciated (or perhaps not appreciated) there is a strong likelihood that the average person, if they have not already developed cancer, is probably well on the way to doing so. Autopsies of people who have died from various other causes than cancer have showed that unsuspected pre-cancer or cancer was present inside the majority. Cancer tests are not exact, and even well developed cancer may not be revealed. Tissue biopsies and exploratory surgery, whatever they may reveal, are damaging and more likely to accelerate the development and spread of cancer anyhow.

Kasper Blond, MD, FICS, world famed cancer specialist, says: "Certain liver function tests are a more reliable indication of pre-cancerous and cancerous conditions than biopsies. These tests indicating a disordered function of the liver are not specific for cancer and are present in all chronic nutritional disorders as well. . . An increase of the fasting blood sugar over 90 mg% is always a sign of a pre-cancerous disorder. The number of tests indicating that cancer is a general disease is constantly increasing and no scientist today can seriously consider cancer as a local disease.

If a patient has less than 10 mg% of Vitamin C in his blood, one is justified in suspecting cancer.

"Supporters of the early diagnosis of cancer do not realize that the appearance of a local tumor occurs at a very late phase in the course of the cancer disease.

"Anyone who has studied the results of correct feeding of the cancer patient must be impressed by the number of chemical blood-changes in the course of the disease."

So when all is said and done, what really is the point of medical tests? Non-invasive tests are open to doubt, invasive tests cause harm and are likely to worsen the situation. Whatever medical treatment which follows is innocuous anyhow.

No matter what the tests reveal, there is only one sensible course of action to start with, and that is to stop doing the things which cause cancer.

## **The role of diet**

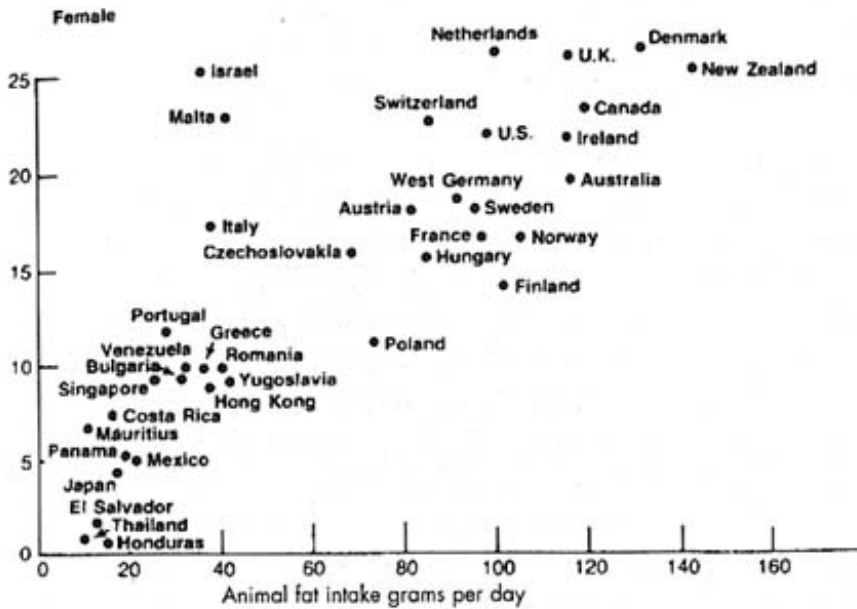
A study conducted at Loma Linda University, California, on 100,000 Californian Seventh Day Adventists, with emphasis on diet showed that their cancer rate (all kinds) is half that of the national average.

*The Australian*, June 10, 1975 reported: "According to a survey of 800 Adventists in Sydney, incidence of common malignant diseases such as lung cancer and stomach cancer is only one-third that of the rest of the community. Incidence of abnormal blood pressure and high cholesterol levels was about 10% of that of the rest of the community".

Upon investigation, the connection between bad diet and cancer becomes just as obvious as its implication with the other degenerative diseases.

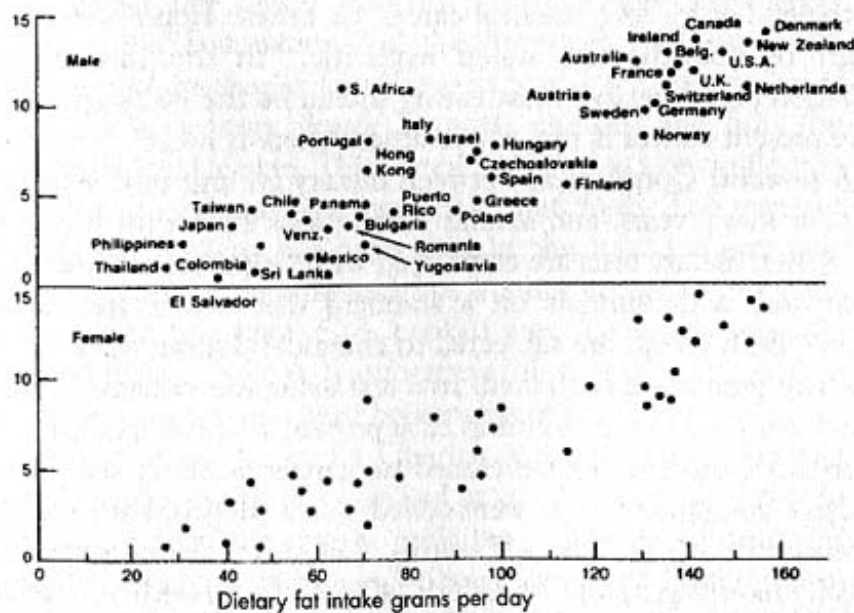
The pollution and oxygen deprivation in the fluids of the body which form the environment surrounding the cells of all tissues is directly attributable to bad diet, and the factors causing lipotoxemia have already been fully described. In the cancers common in industrial countries, once again fat appears to be the main villain (see Figs 20.2, 20.3, 20.5), followed by cholesterol and excess protein. Apart from its contribution to lipotoxemia, fat adds further to the cancer risk, as already mentioned, by causing increased production of the growth stimulating hormone, estrogen. As previously explained, red cell aggregation, platelet stickiness and high blood viscosity invariably accompany a diet high in these substances, and are made worse by sugar, alcohol, tea, coffee, salt, and the rest of the tasty junk with which our bodies are assaulted.

Fig 19.2 Breast cancer mortality rates



Breast cancer mortality (age adjusted) vs per capita consumption of animal fat. Compare this group with Fig. 19.5. Italy, Israel and Malta, with low animal fat intake, still have high cancer mortality. This is accountable to the high intake of vegetable oils by these people.

Fig 19.3 Colon cancer mortality rates



Colon cancer mortality (age adjusted) vs per capital consumption of total dietary fat, both animal and vegetable.

Moreover, the Western diet, as discussed earlier, is very deficient in Vitamin C due to inadequate amounts of fresh fruits and vegetables. Vitamin C is essential for building and maintaining collagen, the protein substance which binds the tissue cells together; it is necessary for proper utilization of oxygen by the cells, for the integrity of the immune system, and for detoxifying the body. All vitamins and minerals of course are essential, especially Vitamins A and E, in preventing cancer, but Vitamin C is the most difficult to obtain from normal food sources in adequate amounts.

Dr F.W. Forbes Ross of England, in his book *Cancer: Its Genesis and Treatment* (published in 1912) emphasized the paramount importance of potassium in the diet in the prevention and reversal of the cancer process. He ensured all his regular patients maintained an adequate intake of potassium and claimed that not one of them ever developed cancer, notwithstanding that many had come to him with an obscure internal disease which he suspected may have been cancer. Dr Forbes Ross also claimed a high success rate in treating patients who came to him with cancer, by supplementing their diets with bicarbonate of potash.

On a good diet it is unnecessary to use supplementary vitamins or minerals (with perhaps the exception of Vitamin C, as previously discussed) and it should be noted that both potassium and magnesium are inadequately provided in meat, eggs, cheese, fat, sugar and grains.

The chemical circumstances which directly influence the behavior of body cells is determined, moreover, not only by the substances of which the food is formed, but also by whether they are cooked or raw and by the way in which they are digested and assimilated and the wastes eliminated.

**Constipation:** For over a hundred years it has been observed by doctors that the most common factor associated with all forms of cancer is the condition of constipation. Not only does the Western diet cause blood pollution and high blood viscosity, it is guaranteed also to cause constipation. In most respectable homes can be found, along with all the other patent medicines, some form or other of bowel-opening preparation, and perhaps one or two magazines in the bathroom.

Sir William Arbuthnot Lane, the famous British surgeon,\* repeatedly emphasized that he had never known a single case of cancer which had not been preceded by prolonged intestinal stasis. Professor Aviles of the Biochemistry of Cancer Department, Guadalajara, Mexico, in an article entitled "The Anti-cancerous Properties of Vitamin F" (*Let's Live*, September 1954), said that out of 7,715 cancer patients examined over a 15 year period, 99% had suffered from constipation and that the degree of malignancy was parallel to the degree of constipation.

\*Sir Arbuthnot Lane considered the large intestine (colon) to be the seat of many diseases and at one time specialized in completely removing this organ. This drastic measure worked inasmuch as metabolic disorders such as arthritis symptoms, gall bladder "involvements", thyroid difficulties etc. would disappear in a few days following the operation. (See *The Health Secrets of a Naturopathic Doctor*, M. O. Garten, 1967.)

Dr Denis Burkitt and Dr Hugh Trowell of England both spent 25 years as doctors in areas of rural Africa. These doctors observed over that time that constipation in these areas was virtually non-existent, and so too was cancer. Dr Burkitt noted that the rural Africans passed about one pound of fecal matter per day, about four times the amount of English people and that the Africans' feces were soft, bulky and almost odorless.

Investigation showed another significant thing. The transit time from eating to elimination was for the African about 24 hours whereas with the English it was three days or more. This meant that, even with a daily bowel movement, the wastes of food eaten by the English remained within them three times as long.

The obvious cause of these differences was the sort of food eaten. The average African villager ate mainly cornmeal, beans, bananas and potatoes. This diet was low in fat and animal protein, devoid of refined carbohydrate, and contained about three times the amount of vegetable fiber of the English diet.

The researchers analyzed countless medical records, and this is what became evident:

1. Cardiovascular disease, the leading cause of death in Western countries, was virtually unknown in rural Africa.
2. The cancers of civilized populations were also virtually unknown.
3. So too were diabetes, hypertension, appendicitis, hemorrhoids, diverticulosis, varicose veins, phlebitis, obesity and hernia.

The "civilized" Western diet not only causes lipotoxemia and high blood viscosity by virtue of excess fat, cholesterol, protein and so on entering the system from the digestion, but in addition causes autointoxication when unexpelled wastes putrefy in the colon (large bowel). The digestive process involves bile from the liver and the action of bacteria normal to the colon. These bacteria comprise 20-30% of the bulk of the feces. There are different types of colon bacteria. Healthy people have a type which requires oxygen to live, called aerobic bacteria. With the putrefying remains of a high fat, high protein, low fiber diet, the bacteria change to a form called anaerobic bacteria, which take over the colon, and these react with acids in the bite to form poisons, which include apcholic acid and deoxycholic acid which are carcinogenic. Not only is the colon therefore constantly exposed to these carcinogens in an oxygenless situation, but at the same time the toxins are taken up by the bile fluid which circulates back to the liver,

and so enter the already toxic bloodstream to exert their carcinogenic effect throughout the entire body.

The Western diet is further conducive to cancer in that it lacks not only the necessary fiber but lacks also the anti-carcinogenic substances contained in the missing raw fruit and vegetables.

On the other hand, with a low fat, high fiber diet, normal aerobic bacteria operate free of toxins, the high fiber feces contain a much higher proportion of intact bile, and the fecal matter stays in the colon less than 18 hours. This study was described by Dr M.G. Hall of the Bacterial Metabolism Research Laboratory, London, in the papers, "Fecal Bile Acids and Clostridea in Patients with Cancer of the Large Bowel" (*Lancet*, March 8, 1975) and "Steroid Nuclear Dehydration and Colon Cancer" (*American Journal of Clinical Nutrition*, December 27, 1974)

Appendicitis is caused by poisons and harmful bacteria of the colon. As described by Dr Norman Walker in his book, *Colon Health*, the appendix secretes a powerful germicidal fluid into the cecum, which is located between the small intestine and the colon. This germicide acts as a barrier protecting the intestine from the entry of colon bacteria and likewise protecting the colon from any harmful substance entering it from the intestine. So constant sometimes is the demand upon the appendix that it may lose function and become inflamed. This is appendicitis.

At the end of his long medical career, Dr Ernest Tipper (referred to at the start of this chapter) stated explicitly: "In the case of cancer, constipation and excessive meat eating should be the two suspects; when they are present cancer is rife, where absent there is none".

**High protein:** Correlations between dietary fat and cancer have been evident for many years, and similar correlations exist with high protein intake. When dietary tests are conducted with animals, the "test" animals are compared with animals on a standard diet which are called the "controls". Both groups are subjected to chemicals known to cause cancer and the two groups are compared. In a test using the virulent carcinogen aflatoxin, rats on a diet containing 20% protein all developed cancer, but those on a 5% protein diet developed no cancer at all. A similar test in which large amounts of sugar were added to the diets of both groups was described by Dr M. H. Ross ("Proteins, Calories and Life Expectancy", *Federation Proceedings*, 18:1190, 1959): "40% of the rats still alive after one year, whose intake of both milk protein and sugar was high, developed spontaneous tumors of all kinds throughout their bodies. In contrast, only 20% of the rats on low protein, high sugar intake developed tumors. Further, coronary arterial athermatoid lesions and unusually high blood levels of cholesterol were found in rats maintained on high protein diets, even without extra fat. And after one year, 75% of the rats on high protein developed kidney disease".

Cooked protein is difficult to digest, and when incompletely digested protein enters the colon it putrefies and ammonia is formed.

Dr Willard Visek, Professor of Clinical Sciences, University of Illinois Medical School, said recently: "In the digestion of proteins, we are constantly exposed to large amounts of ammonia in our intestinal tract. Ammonia behaves like chemicals that cause cancer or promote its growth. It kills cells, it increases virus infection, it affects the rate at which cells divide, and it increases the mass of the lining of the intestines. What is intriguing is that within the colon, the incidence of cancer parallels the concentration of ammonia".

Dr Broda Barnes (mentioned earlier for his studies of heart disease) ascribes the association of high protein diet with cancer as being due mainly to hypothyroidism brought about by the demands of protein metabolism upon the thyroid. (See *Hypothyroidism*. )

**Meat:** Consumption of meat is strongly suspected to be conducive to cancer. Dr John Berg and associates of the US National Cancer Institute and Tohoku University School of Medicine (Japan), studied 179 colon cancer patients and 357 non-cancer patients, all Japanese of varying origin and background, and found that consumption of beef was the only factor common to all the cancer patients. Dr Raymond Shamberger of the Cleveland Clinic Foundation told the American Association for Cancer Research annual meeting in San Diego in May, 1975, that he has identified in beef, and to a lesser degree in pork,

chicken and fish, the potent carcinogen malonaldehyde. This chemical begins to form in flesh soon after death. Leftover food contains more of it than fresh. The measurement of malonaldehyde content has been used in the food industry for years to determine if food is stale or rancid, but was not known to be carcinogenic.

As described in Chapter 15, cooked meat causes damage to all vital organs, and it must be clearly understood that in order to prevent cancer or reverse it, these organs must be capable of reasonable function.

One hundred years ago, Dr Charles de Lacy Evans, who had been a surgeon in an English cancer hospital before devoting his career to natural medicine, described the cancer inducing properties of meat. He added: "When meat is given, it should be boiled, and the liquid broth, soup or beef tea, thrown away. It contains the irritating constituents of the flesh which encourage the growth of cancer".

In 1977, the International Agency for Research on Cancer reported a comparison between Copenhagen and rural Finland. In Copenhagen the consumption of meat was very, high compared to Finland whereas the Finns consumed a great deal more fat. However, despite the much lower consumption of fat in Copenhagen the incidence of colon cancer there was four times higher than in Finland. A comparison between New York and Finland revealed the same situation.\*

\*Other factors to be taken into account in this comparison are: 1. The Finnish diet is much higher in fiber. 2. The consumption of beer has been related to colon cancer and in both Copenhagen and New York the beer consumption is much higher than in Finland. 3. The stress factor in cities is much greater than in rural areas.

Meat not only contributes large amounts of fat, cholesterol, protein and substances known to be carcinogenic, at the same time it contains no fiber and therefore causes constipation. In addition, growth hormones given to beef cattle to make them grow faster can have the same artificial stimulating effect within the body of someone who eventually eats the beef. Furthermore, it has also been recently demonstrated that dietary cholesterol specifically inhibits the anti-cancer action of macrophages, the large white cells of the body's immune system.

An animal experiment reported in *Nature*, December 1978, showed that dietary cholesterol paralyzes the macrophages. Two groups of animals were fed a synthetic diet containing 8.5% protein and only 1% fat, the same diet which has been shown to support healthy growth in children. Cholesterol, the equivalent of two eggs a day (600mg) for a human, was added to the diet of the test group and both groups were given a carcinogen to promote cancer. At the end of one year, 100% of the cholesterol group had cancer with 90% deaths, whereas the other group suffered only a 20% incidence, all of which died; however, the remaining 80% remained perfectly healthy and free of cancer.

Most human studies comparing the incidence of cancer with blood cholesterol levels have shown the expected positive relationship. However, the Framingham study, in the case of males, showed an inverse relationship in which colon cancer incidence was 2.7 times higher at blood cholesterol levels below 190 mg%, and because of this observation some health authorities have recommended that levels above 190 be maintained. This advice is wrong, because the Framingham conclusion did not take all factors into account. The error is explained in a paper titled "Diet and Colon Cancer", from the Pritikin Research Foundation, May 1982. In the Framingham cases, says Pritikin, the cancers are still related to the intake of cholesterol although not to the level of cholesterol in the blood. The blood cholesterol level is relatively low only because it is being used up to produce the large amounts of bile acids needed to process the large amount of fat in the diet, and it is the excess of bile acids in the colon that increases the cancer risk.

**Processed starch and sugar:** In a 43-country survey by the British Cancer Institute, sugar featured as the primary dietary factor in breast cancer, fat second and protein third.

Dr Victor Bagnall, writing in "Nutrition: Its Relation to Cancer" (*Cancer News Journal*), showed sugar consumption to be correlated to breast, prostatic, ovarian, bladder, intestinal and rectal cancer. Dr Joseph Issels of Germany also has made this correlation.

Processed starch food taken in large quantities is associated with stomach cancer. An Israel study



described in *You Can Fight Cancer and Win* by Jane Brody and Arthur Holleb (1977), showed that stomach cancer incidence was greater among people consuming high levels of bread, noodles, cereals, beans and nuts.

**Salt:** As mentioned in Chapter 14, salt is a powerful irritant and a strong inhibitor of enzymes, as well as interfering with circulation by causing fluid retention in the tissues. Even in small quantities, salt has been observed to increase the rate of cancer growth.

Dr E. D. Robinson of the National Biochemical Laboratory, Mount Vernon, New York, considered common salt "the most active cancer cause among inorganic agents". Dr Albert Schweitzer, when he went to work in Africa in 1913, said he knew of no cancer there among natives and put this down to their diet. "The most significant difference," he said, "was that natives 200 miles from the coast consumed no salt. Later, when these natives started using salt, we have seen cases of cancer in growing numbers on our region . . . Salt is the chemical enemy of potassium, and can cause body chemical imbalance."

**Raw food vs cooked food** (refer to Chapter 15): The main factor underlying the disease called cancer is the cooking of food--not just because of the deleterious effects on the food--but chiefly because cooking renders palatable the animal protein and fats which cause most of the harm. Foods which in their natural uncooked state would be rejected by humans, are made edible and tasty by cooking and flavoring.

As long ago as 1829, Vincent Priessnitz of Silesia discovered the adverse effects of eating cooked food. He fed two pigs on experimental diets--one on cold raw foods, the other on hot cooked foods. When he killed them, he discovered that the pig fed on the raw food had firm healthy flesh but the flesh of the pig fed on cooked food was inflamed and brittle.

Not only does the cooking of any food deplete its nutritional value and tend to produce pathogenic substances, it also destroys natural enzymes which normally assist in the digestive process. Whereas a healthy person can supply from body sources the necessary enzymes in adequate amounts regardless of whether enzymes are contained in the food or not, ailing people or the elderly may to a varying extent lack this capability. In this latter case, eating cooked food may deplete enzyme reserves to the detriment of proper metabolism elsewhere in the body.

In addition to the depletion or destruction of enzymes, vitamins and minerals, other pathological changes occur in food when it is cooked and this is indicated by the excited reaction of the immune system when the food is eaten. The white blood cell count of the healthy person increases to a level proportional to the degree to which the food has been heated or processed, and may double or even treble. This effect, already described, is called leucocytosis.

The greatest demand on the digestive organs is the digestion of cooked food, particularly meat and cereals, and it will be remembered that the constant consumption of cooked food produces marked hypertrophy of the pancreas.

Dr Edward Howell of Chicago pointed out over fifty years ago that the hypertrophy of organs consequential to excessive function often proceeds to the atrophy of exhaustion, and that atrophy of the pancreas occurs in many terminal wasting disease.

**Vitamin, mineral, enzyme deficiencies:** Most people in Western countries, mainly by virtue of the fact that most of the food they eat is cooked or processed in some way, are likely to be marginally supplied with many vitamins and minerals. At the same time their enzyme systems will be overtaxed, often to the extent of damaging the pancreas, and it is not surprising that patients with chronic disease conditions usually display a number of deficiencies. As already mentioned, cancer patients usually have low enzyme levels and low body temperatures. Drs A. Goth and I. Littmann in a paper entitled "Ascorbic Acid Content in Human Cancer Tissue" (*Cancer Research*, Vol 8, 1948) described how cancer most frequently originates in organs whose ascorbic acid (Vitamin C) levels are below 4.5 mg% and rarely grows in organs containing ascorbic acid above this concentration.

Other deficiencies most commonly associated with cancer are those of Vitamin A, Vitamin E, and the

minerals iodine, selenium magnesium, potassium and germanium, and many people as a protection take these substances in synthetic form. As already discussed, it is far better to follow proper dietary rules rather than work with the guesswork associated with synthetic products.

## Anti-cancer diets

As a person with cancer, or developing the early stages of cancer, has already defective blood chemistry, with marginal function of vital organs and diminished enzyme activity, it is imperative that only the simplest, purest, most easily digestible foods such as fresh ripe fruit be eaten. Ripe fruit is virtually pre-digested and its digestion demands very little enzyme activity.

The principles of correct dietary procedures have been used in the prevention and correction of cancer and other conditions for at least as far back as 1809, and probably throughout history. There are today probably hundreds of special diets designed to promote good health, and by this stage the reader should be qualified to assess them.

**The Gerson diet:** The Gerson diet, based on raw fruit and vegetables, low in sodium and high in potassium, has proven most effective in the restoration of cancer patients and patients with all manner of other metabolic diseases. Although, as mentioned, similar diets have been used successfully since the early 1800s to restore cancer patients, Dr Gerson's diet, which includes supplementary enzymes,\* was developed more scientifically in the light of 20th Century research over many years of successful cancer treatment, and today forms the basis of all successful cancer therapy.

\*Dr Gerson provided his patients with supplementary enzymes by giving them raw calves' liver juice to drink. Enzymes of many kinds derived from both plant and animal sources are now available in powdered or tablet form.

Sir Arbuthnot Lane summed it up over fifty years ago, thus:

"What we should do then if we would avoid cancer is to eat wholewheat bread and raw fruit and vegetables, shunning all meat. First that we may be better nourished, second that we may more easily eliminate waste products and thus adequately drain the house in which our cells live. \* Whoever will correct his diet to a reasonable extent, take reasonable exercise, and keep his digestive tract absolutely clean, need have no fear of cancer."

\*Dr A Garten in his book *The Health Secrets of a Naturopathic Doctor*, described how Dr Senator founded the concept of autointoxication in 1888 and how Dr Melke in 1897 observed that a dietary change from meat to bread, fruits and vegetables resulted in a complete alteration in the intestinal bacteria and the disappearance of poisonous substances.

**Vegetables and herbs:** Early in 1984 the National Cancer Institute reported a study in North Carolina which showed that women who ate less than two servings of fresh fruit or vegetables a day were three times more likely to develop cancer as women who ate four or more servings a day.

It is recognized that all the many nutrients, some of them still possibly undiscovered, play a part in the chemistry of every cell. Dr Leo Wattenberg, working at the University of Minnesota School of Medicine, discovered that rats fed a balanced, highly purified diet containing all known vitamins and nutrients were not able to make certain enzymes (biological catalysts) in the liver which inactivate cancer-causing chemicals. However, when the rats were fed a crude diet containing alfalfa (known in Australia as lucerne) they were able to produce the enzymes. And when alfalfa alone was added to the purified diet, this caused the enzyme to be made. Other experiments showed that this enzyme increased protection against cancer even when cancer-causing chemicals were added to their diet. Dr Wattenberg found that cabbage, Brussels sprouts, turnips, broccoli, cauliflower, spinach, dill and celery caused the enzyme to be made but varied in effectiveness according to their freshness and the soil in which they were grown.

Dr Wattenberg identified the actual chemicals in the vegetables which cause the protective enzymes to be formed. They belong to a well-known family of organic chemicals called indoles. He also found that citrus fruits contain chemicals called flavones which have the same effect as indoles. Beans and seeds are rich in plant proteins called lectins which have been found to protect animals against cancer in laboratory

experiments.

In other experiments by Dr M. R. Mainlow at the Oregon Primate Research Center, alfalfa, when added to experimental diets had been shown to lower assimilation of cholesterol from food. In tests on monkeys and rabbits, assimilation was reduced from 76% to 47%. The active substances in alfalfa are known as saponins, a type of glycoside found in plants. Saponins lower the surface tension of water, and historically have been used as wetting agents for cleaning purposes. Cast into rivers, saponins kill fish without rendering them poisonous to eat. They are hemolytic if injected into the bloodstream, but are not absorbed into the bloodstream from the intestines. It would appear these substances dissolve fat and thereby lower blood viscosity.

As indoles derive also from glycosides, the protective actions of alfalfa and other vegetables may be related in a similar manner to those of ginseng and eleuthococcus. (See *Relief of Stress.* )

Amygdalin is a substance contained in many kinds of plants and is claimed by many people in the field of cancer treatment to be capable of inhibiting or destroying cancer cells. Amygdalin is also known as Laetrile or Vitamin B17, and is in common use by unorthodox practitioners as a primary anti-cancer agent. The results obtained from its use have varied widely and have been inconsistent and inconclusive, and there has been great controversy in medical circles about it. Some amygdalin proponents claim it works as a vitamin (usually deficient in the diet), while others say that its anti-cancer action is brought about by cyanide released specifically only in cancer cells triggered by a substance in the cell, and therefore harmless to normal cells.

It is evident, however, that when good results have been obtained using amygdalin it has always been in conjunction with modified diet usually supported by supplementary digestive enzymes, as well as in association with other lifestyle changes.

In addition to amygdalin, there are countless other herbs and herbal extracts claimed over hundreds of years in folk medicine to inhibit and sometimes cure cancer. Many of these are currently being investigated by medical researchers.

There is no question that many complete remissions of cancer have been achieved by herbal medicines taken internally and in some cases applied directly to external cancers. The famous Hoxsey Clinic in Texas successfully employed this form of treatment for many years, but although an independent investigation in 1954 by ten senior physicians from different states certified to the superiority of Dr Hoxsey's methods, the AMA eventually had his clinic closed.

Apart from inhibiting or reversing the growth of cancer, herbal mixtures have been reported to alleviate angina and reduce symptoms of diabetes, in which cases it is clear that fat metabolism and blood viscosity must be favorably influenced.

Obviously the correction of any errors, be they deficiencies or excesses, must favorably affect cellular chemistry. This may explain why, in the history of folk medicine, an enormous variety of herbal substances and extracts, used singly or in combinations, have been shown to favorably influence the course of various diseases, often effecting cures. There are far too many reports and claims of this kind, from all over the world, to be disregarded.

However, what works in one case may not work in another, and with so many variables involved in the processes of cell chemistry leading to cancer, consistent results cannot be expected unless all factors are optimised.

## **The role of carcinogens**

***Diseased teeth:*** In his book *Prevention and Cure of Cancer*, Dr Mulhim Hassan of Lebanon insists that a prime cause of cancer is the poisoning of the bloodstream by diseased and infected teeth, and his book is illustrated with many photographs showing the healing of various cancers and eye infections subsequent to

removal of the infection source. Dr Joseph Issels of Germany (referred to later) has for over forty years asserted the causal connection of oral infections with cancer, and the removal of infected teeth is considered by him to be absolutely essential as part of the cancer therapy. Dr Max Garten, also of Germany, said in agreement with Issels: "This is one phase in the cancer treatment that requires adamant and uncompromising attention".

**Food additives as carcinogens:** In July 1976, specialists from the US National Cancer Institute, American Health Federation, Harvard University, Massachusetts Institute of Technology and the Wistar Institute of Philadelphia, testified before the US Senate Select Committee on Nutrition and Human Needs to the effect that the potential of food additives for causing cancer had been grossly exaggerated, but that the "Standard American Diet" itself, high in fat, protein, highly-refined carbohydrates and low in "roughage", is possibly a causative factor and certainly a predisposing factor in hundreds of thousands of cancer cases each year.

The liver is the body's first line of defense against harmful organisms and substances ingested in food. If the major cause of cancers were indeed carcinogens in the food, surely cancer of the liver would be most common. But it is not.

Denmark has very strict prohibition against most food additives but has a cancer death rate 20% higher than Norway and Sweden which have far fewer restrictions on additives. In *Cancer Research*, Vol 35, page 3379 (K. Carroll), the dietary fat intake per capita in Denmark was reported as 158 gm per day and in Norway and Sweden as 132 gm per day, a difference of 20%. Again the cancer rate correlates exactly with the fat intake.

All the observations and animal tests over and over reveal that with or without carcinogens, high fat levels constitute the greatest danger.

**Saccharin:** In tests where rats were fed saccharin the equivalent for humans of 800 12 oz bottles of saccharin-sweetened soft drink per day cancer occurred in about 14% of the second generation rats. So it, was banned by the US Food and Drug Administration even though it was never shown to cause cancer in humans. Thus many people reverted back to sugar which has indeed been shown to increase human mortality.

**Fluoride and chlorine:** Fluoride is an insidious, cumulative poison strongly suppressive to the immune system. There have been a number of occasions where the concentration of fluoride in water has inadvertently reached high levels, resulting in serious sickness through poisoning. Some people have died.

High levels not only cause white teeth to mottle, but Dr J. Yiamouyiannis, Science Director of the US National Health Federation, after researching the records of the National Cancer Institute covering 25 cities, concluded there is a definite link between fluoridation and the cancer death rate.

Dr Dean Burk, for thirty years in cancer research with the US National Cancer Institute and formerly Chief of Cyto Chemistry there, now runs the Dean Burk Foundation in Washington, DC and is currently working with Dr Yiamouyiannis. On December 10, 1983, Dr Burk issued an open communication which reads as follows:

"The trends of the average annual cancer death rates (CDRs), from 1940-1969, of the 10 largest artificially fluoridated American cities, whose fluoridation commenced during the period 1952-1956, were compared with the corresponding trends of the average annual cancer death rates of the 10 largest American cities of equivalent initial CDR that remained nonfluoridated over the same period of 30 years. Comparisons were made with both weighted and unweighted averages. By 1969, the US officially reported, observed, average cancer death rate had reached an excess of more than 10% in the fluoridated group (population ca. 10,000,000) above that in the nonfluoridated group (population ca. 7,000,000). Initiation of this differentiation took place coincidental with initiation of artificial fluoridation, and was clearly evident statistically and graphically within 3 to 5 years, thus specifically indicating a causal, time-linked fluoridation-cancer association.

"The foregoing observed ('crude') data were adjusted for age, sex and ethnicity simultaneously and separately by conventional indirect methods, using the 1950 total US population as standard, for the periods 1940-1950 and 1950-1970, so as to consider trends before and after fluoridation. In these adjustments all censal and interpolated intercensal data were used, in accordance and with widespread practice, and also a number of variations in choice of standard populations, and age groupings, (eg. to, 9 or 4), and also with respect to both ratio (SMR) and difference between CDR observed and CDR expected. The results obtained indicate that no more than about 20-40% of the fluoridation-cancer linkage can be explained by the indicated adjustments for age, sex and ethnicity, leaving the fluoridation factor dominant.

"All proposed contraindications to this finding of a highly harmful (mortal) fluoridation-cancer link, most notably those contraindications advanced in Britain, were in error from inadequate consideration of available and necessary data of the type just indicated, primarily (1) prefluoridation period data and (2) otherwise widely used intercensal data (interpolated or officially estimated). The contraindication advanced in the Opinion of Lord Jauncey (Edinburgh Court of Session, June 1983, page 362, item 131) suffers from the same scientific inadequacy, and is at odds with the Decisions in the three major American courts where fluoridation was ruled a dangerous to health (Judge Flaherty, Pittsburg, November 1978; Judge Niemann, Illinois, February 1982; and Judge Farris, Houston, May 1982), and where much the same scientific information was presented in evidence."

T. Okamura and T. Matsuhisha reported a similar correlation between fluoride and gastric cancer in Japan. Due to a number of deaths of patients treated on kidney machines using fluoridated water in the USA and Canada, the US Surgeon General cautioned all American hospitals to avoid use of fluoridated water in kidney machines. (See also *Subtle fluoride poisoning*, Chapter 21.)

Chlorine is a chemical used to disinfect water supplies in certain areas and it too is known to be suppressive to the immune system. Its effect is described in the discussion on the immune system which follows.

**Other carcinogens:** There are innumerable chemical substances used in industry and domestically which in addition to various chemicals used in the processing of food, are known to be detrimental to body chemistry to the extent of favoring the onset or growth of cancer.

Although most people are exposed to them, only a minority actually develop cancer even among those who are heavily exposed. Thus such chemicals must be considered to be not primary causes, but "trigger" factors which influence pre-cancerous tissue to further adverse change. Cigarette smoking is an example of this as described in the discussion on lung cancer. Another example, not as clearly proven, is aluminum which enters foodstuffs from aluminum cooking utensils. Suspected of being the most widespread pollutant of indoor air is formaldehyde, a chemical used in particle board, artificial wood-grain finishes, foam insulation, plastics, disinfectants, paper products, even toothpaste, and many other products. The chemical continually enters the air (a process called "off-gassing") from the various sources and causes allergic responses which range from irritation of eyes, skin and respiratory tract to nervous disorders and asthma. Recent research by the Chemical Industry Institute of Toxicology showed that rats exposed for two years to formaldehyde fumes developed nasal tumors.

Reference earlier in this chapter was made to the association of beer consumption with the incidence of cancer. A possible link is suggested by the report from a British Regional Heart study of 7,000 men aged 40 to 60 in which it was found that heavy beer drinkers had 30% more lead in their system than light drinkers or teetotallers. Those that smoked as well, had even higher amounts of lead. It is known that commercially manufactured beer also contains nitrosamines, which are carcinogenic substances. It is known also that beer, even in small quantities, increases the level of blood fats, reducing circulation and increasing blood pressure.

## The role of smoking

Smoking directly contributes to the cancer process in many ways.

1. Inhaled carbon monoxide inhibits the oxygen-carrying capacity of the red blood cells.
2. Stress is produced in the body.
3. The effect of 1 and 2 is to increase blood viscosity and reduce blood circulation.
4. Carcinogenic chemicals are introduced into the body.
5. Smoking destroys Vitamin C, essential to collagen integrity, oxygen metabolism, and body detoxification.
6. Irritation in the respiratory tract is capable of triggering lung cancer.

## **The role of exercise**

The direct effect of aerobic exercise in the metabolism of fat, lowered blood viscosity, and vastly improved oxygen transport has been fully described. It has been shown too, that physical fitness provides enormous protection against physical and emotional stress--in fact every single body function becomes more efficient, including the function of the immune system, a most crucial factor in cancer.

Its protective effect against all disease can be clearly seen, regardless of all other factors, and it has been observed that the incidence of cancer among athletes is only one-seventh that of the average population. Although immensely effective, aerobic exercise cannot, however, convey full protection when the other cancer factors, which may include the stress of overtraining and intense competitions are severe.

Studies by Dr Andervont (1944) and Dr Muhlbock (1950) of Holland, with laboratory mice susceptible to mammary cancer, demonstrated that by segregating them in different sized groups in different cages of different materials, the incidence of cancer among the females varied from 29% to 83%. In one experiment using two groups of mice caged under identical conditions but with one group provided with an exercise wheel, the group with no wheel had a cancer incidence of 67%, and the group with the exercise wheel only 43%. It was assumed that the exercise wheel provided a psychological advantage to the mice in that group, but it is more likely that the benefit was a physical one. Another study by the Labor Research Institute of Japan, reported in *Prevention*, February 1977, showed that mice given the carcinogen Lexzidine suffered 33% less cancer when an exercise wheel was provided to the experimental mice.

Other tests on mice showed when a test group was fed only half the amount of food that was consumed by the control group, ie. the same food but only half as much, when carcinogens were added, only 2% of the test group developed cancer as against 40% of the controls. However, if the extra calories were burned up by exercise, the incidence in the control group was also only 2%.

## **The role of stress and personality**

Stress and its relationship to disease has been described in Chapter 8. Intense and prolonged stress has been shown clearly and specifically to be strongly associated with the onset of cancer. In this regard its effects are widespread.

1. Oxygen available to the tissue cells is decreased because of elevated blood fats and increased blood viscosity which follow stress.
2. It likewise decreases oxygen available to the lymphocytes, the protective white cells of the body's immune system, thus debilitating them.
3. The immune system, constantly stimulated by stress, becomes exhausted and impotent, the thymus shrunken.
4. Other hormonal upsets may occur.

In this condition, the body's defensive white cells, although capable of destroying the cancer cells, make no effort to do so.

Dr G.J. Nossal of Melbourne, in his book, *Antibodies and Immunity* (Nelson), discussing the destructive effect of x-rays on white cells says, "It is not unusual for human beings to have placed on them a stress as great as near-lethal (to the lymphocytes) x-irradiation".

Whereas emotional stress appears to be the most significant stress factor, it should be remembered that faulty diet, alcohol and tobacco are also stress factors and that all stress factors are additive.

Galen, the famed Greek physician of the 2nd Century AD attributed cancer to a melancholy disposition.

A century ago the physician, Sir James Paget wrote: "The cases are so frequent in which deep anxiety, deferred hope and disappointment are quickly followed by the growth and increase of cancer, that we can hardly doubt that mental depression is a weighty additive to the other influences favoring the development of the cancerous constitution".

Sir Heneage Ogilvie, a British surgeon, in his book, *No Miracles Among Friends* says: "The instances when the first recognizable onset of cancer has followed almost immediately on some disaster, a bereavement, the breakup of a relationship, a financial crisis, or an accident, are so numerous that they suggest that some controlling force that has hitherto kept this outbreak of cell communism in check has been removed".

J. I. Rodale, a lifetime student and author on the subject of health, collated so much material linking state of mind with cancer that he wrote a book on the subject called *Happy People Rarely Get Cancer*.

Dr Lawrence Le Shan, an experimental psychologist and research specialist, noticed this link among his patients over twenty years ago. He made a preliminary test to confirm for himself the link of emotional disturbance with cancer which involved 28 subjects, 15 patients with cancer, eight patients with no cancer and five free of disease. Considering emotional factors only, he correctly selected 14 out of 15 cancer patients, missing out on one patient with skin cancer. He incorrectly picked three patients, one with arteriosclerosis, one with allergy and one with hypothyroidism, as having cancer. The factors he considered were: loss of a crucial relationship and loss of purpose for living, the inability to express hostility, and emotional tension over the death of a parent, not necessarily recently. In 22 years of continued research, the syndrome of despair, the bleak hopelessness of ever achieving any meaning, zest or validity in life, he found to be the predominant factor. Seventy-six percent of all cancer patients studied, Dr Le Shan said, had this syndrome as against 10% of non-cancer patients.

Historically, cancer rates have always been significantly higher in cities throughout the world. In the *Scientific Australian*, July 1979, it was reported that: "More than one-third of Sydney-siders suffer from depression, according to a survey conducted recently by Professor John Gibson at the Australian National University. The feelings ranged from deep melancholy to intense despair". The advent of cancer for the deposed Shah of Iran is understandable considering the enormous stress he suffered.

Certain personality types are more susceptible, in our modern way of life, to cancer and other degenerative diseases. These types relate closely with the type 'A' classification of Drs Rosenman and Friedman. In his book *You Can Fight For Your Life* (M. Evans & Co, NY 1977) Dr Le Shan says: "Cancer victims seem to have a strong life potential, creative, more inner 'fire'. This impression was so strong and consistent that I often found myself speculating whether cancer might not be a selective disease that is more likely to appear in those with the highest level of emotional force, especially if their lives did not allow for the full venting of that force".

This is readily understandable inasmuch that the higher the intellect, the more exposed it is to the syndrome of "future shock", one of the most harmful factors of modern civilization\*. The more creative and active a person is, the more they over-commit themselves to diverse personal relationships and projects until they become intolerably over-involved and therefore over-stressed. It would seem that, with higher aspirations and emotions, they not only reach higher peaks in life, but suffer greater depression from emotional set-backs.

\*A study reported by the Texas Department of Mental Health and Mental Retardation showed the cancer death rate among the mentally retarded was only one-fifth that of the general population, but that in paranoid patients the rate was higher.

This type of person, however, has the best record of recovery from cancer. When they are down, they count their blessings and get up again. A report published in April 1978 by the Institute of Neotic Sciences, San Francisco, by Dr C. Simonton, former chief of radiation therapy at Travis Air Force Base,

and psychologist, Jeanne Achterberg and Stephanie Matthews, remarked that people who show remarkable powers to resist the ravages of cancer seem to display special personality traits. "They are verbal, confrontive, at times scrappy but generally receptive and highly creative people." The report rated these people highly in the qualities of nonconformity, ego strength, self-control, self-reliance, independence and energy. This too is readily understandable as such people do not easily accept defeat and even without knowledge of cause and effect, would attempt lifestyle changes in a determined effort to survive. In many cases just one or two commonsense changes would make the vital swing to the right side of a borderline condition.

It is Dr Le Shan's opinion that it is not the fear of death--a negative emotion--that marshals the body's resources for survival. Instead, it is the positive emotion of the wish to live that provides the vital force.

In his book *You Don't Have to Die*, Dr Harry S. Hoxsey says: "Cancer is not only a disease, it is also a psychosis. Tell a victim he is hopeless (or let him discover it from his family) and the will to live becomes paralyzed. Show him a way out, strip him of fear and hysteria, give him even a forlorn hope, and the will to live is stimulated. It becomes a powerful ally in the battle against death".

## **Relief of stress by drugs**

As described in the discussion of the role of the immune system which follows, tranquilizers and other drugs have a depressing effect on the immune system and are therefore harmful to a cancer patient. However, a report in the *New Scientist* (August 21, 1980) is of interest. It comes from British gerontologist, Dr Stephen Fulder, and describes a substance, assumed to be a drug, called eleutherococcus which is derived from a plant from the same plant family as ginseng. It acts as a tonic and helps people resist stress, without adverse side effects. The report concludes:

"The most prestigious specialist medical institutes in the USSR have recently found eleutherococcus useful as an adjunct to other medicines in hastening the cure of chronic conditions such as chronic pneumonia, chronic tuberculosis, and vascular dystonia. Oncology institutes in several regions of the USSR, including the Petrov Oncological Institute in Leningrad, reported success in improving the general health of patients with cancer, and reducing the chances of metastasis (the development of secondary tumors). It was also found useful in reducing the debilitating effects of radiotherapy and chemotherapy and therefore allowing higher doses to be given. The same goes for ginseng. Its glycosides have recently been shown to hasten the recovery of patients after serious operations, considerably shortening their dependence on the hospital and reducing complications. Trials with healthy\* people have been extensive in the Soviet Union. The biggest was organized at the Volga car plant in Togliatti, in which eleutherococcus was given to no fewer than 80,000 workers with a consequent reduction in various illnesses and therefore in work losses."

\*As in all industrialized countries, most people are not really healthy but are assumed to be so in the absence of definite sickness.

This form of therapy, like other herbal therapy and megavitamin therapy, although doubtlessly beneficial as described, would be superfluous if the diet were correct in the first place.

It should be realized, of course, that many people live highly stressed and emotional lives without getting cancer. The prerequisite for the onset of cancer is the development of the pre-cancerous state of the body's tissues--the "cancer milieu". Countless people live for years with the cancer milieu without the occurrence of cancer growths, but the advent of severe stress with its depressing effect on the body's defenses is all that is needed, when in this condition, for cancer to advance, and grow.

## **The role of natural sunlight and radiation**

In Chapter 18, I quoted Dr Joseph Meites, an endocrinologist at Michigan State University. Dr Meites said that light entering the eyes causes nerve impulses which influence the lower brain and pituitary gland



and trigger a release of various hormones. He further stated: "We have no idea how many diseases are linked with hormone problems, but we do know that several diseases such as diabetes, infertility, cancer and thyroid disorders are involved with hormone imbalance".

In view of Dr Ott's specific reference to the role of natural light associated with leukemia in school children, some positive attention should be directed at the effect of natural light and its influence on the pineal and other endocrine glands.

An interesting article on the pineal gland in the *Scientific Australian*, March 1980, described some of the gland's functions, but only touched upon its dependence on light. It stated significantly the association of melatonin, a hormone secreted by the pineal gland, with a person's mood. In proper amounts, melatonin induces the feeling of comfort and wellbeing, and it has been suggested that the hormone could well be used as an alternative to currently used anti-anxiety drugs. This information derives from experiments performed by Dr R. F. Seamark of Adelaide University in collaboration with Professor Maurice King of Newcastle University.

Bearing in mind the clearly established relationship between anxiety and stress with the onset of cancer, straight away it can be seen where a link may exist between lack of natural light and the onset of cancer. Specifically, the ultraviolet spectrum of natural light, by its effect on the retina of the eye, activates the pineal gland to produce melatonin which is an anti-stress hormone and therefore an anti-cancer influence.

Additionally, and possibly more important, is the direct effect of sunlight radiation on lowering blood fat and cholesterol levels and detoxifying the blood as described in Chapter 18.

Dr Ott's third book, *Light, Radiation and You* (1982), describes the specific effects of different wavelengths of light and other forms of radiation energy on increasing and decreasing the incidence and growth of cancer, both in humans and in laboratory animals. A recent report of Dr Ott's work, in the *Merced Sun-Star* (Feb 2, 1983) described the experience of Helen Fleming, director of the Merced (California) College radiologic technology program, whose tumors disappeared when she moved to the country and got lots of sunshine. The tumors reappeared when she returned to work but regressed again when the lights in her office and home were changed to a type recommended by Dr Ott.

Also described in Chapter 18 is the adverse effect of various other fluorescent lights. *Lancet*, August 7, 1982, described an Australian study which sought the reason for the doubling of melanoma incidence in the past 30 years. The study of 274 women patients revealed a correlation between office fluorescent lighting and a 250% increase in melanoma risk. Data on 27 male patients showed a 440% increase in risk over 10 years of exposure. The types of fluorescent lights involved were not specified\* and there is conjecture on which light wavelengths could be implicated.

\*They were not the full-spectrum lights as recommended by Dr Ott, because these were unprocurable in Australia at this time.

It should be remembered that ordinary window glass, spectacles and car windows etc., filter out ultraviolet light, and so to gain benefit from natural sunlight a person must spend some time outdoors without glasses. An alternative is the use of fluorescent lights which emit ultraviolet light.

Whereas doctors recommend people to shield themselves against sunlight to reduce their risk of skin cancer, it should be clearly understood that skin damage by sunshine is not the real cause of cancer but only a secondary or "trigger" factor.

## **X-rays**

X-rays are known to be causative of cancer. People who have had many x-rays show a high incidence. Of 1,400 adult males who had x-rays of the hip, those with twenty or more x-rays had twice the rate of leukemia than the others. A similar proportion was noted in a survey of 10,000 women. Because of the danger of x-rays, new equipment has been designed and modern x-ray machines incorporating image intensifiers and fast film only emit one ten-thousandth of the radiation of the machines of 10 years ago.

X-rays destroy white blood cells and deplete the immune system. Dr I. Bross of Rosewall Park Memorial Institute, Buffalo, USA, Seymour Becker, Chief of Suffolk County New York Health Department Radiation Control Unit, and Richard Sandler, Energy Consultant to Ralph Nader, all agree that widespread use of diagnostic x-rays should be halted. In 1960, Dr Emile Grubbe, a world authority on radiation, said just before he died of cancer caused by radiation, that x-rays emitted by TV sets were dangerous over a period of years. Genetic damage could result. According to the International Commission on Radiation Protection, no one should receive more than 5 rem of radiation before age 30. As one year's TV watching provides approximately 1 rem, most young people will far exceed this amount.

## **The role of the immune system**

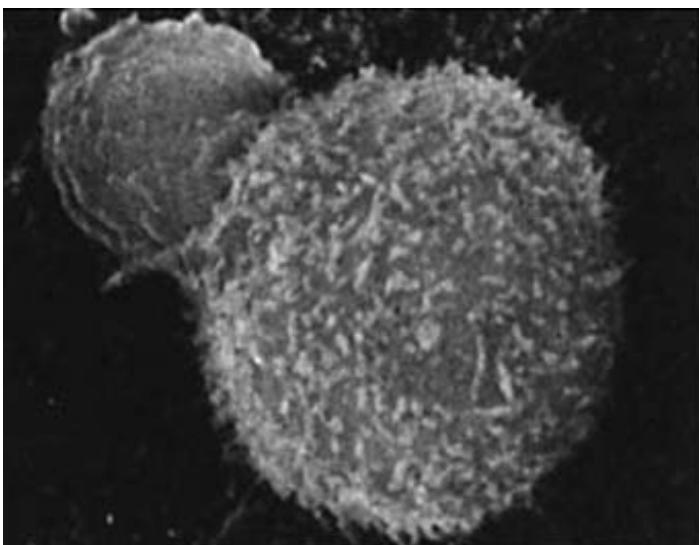
It is generally agreed that regardless of the cause of cancer, a properly functioning immune system will attack and attempt to destroy it.

Malignant cells which migrate in the lymph and blood, in order to colonize elsewhere must first survive the defense mechanism of the body's immune system and lodge in a place "safe" for them. Usually they are arrested before they accomplish this. Millions of such cells are released from the primary tumor but the overwhelming majority do not survive.

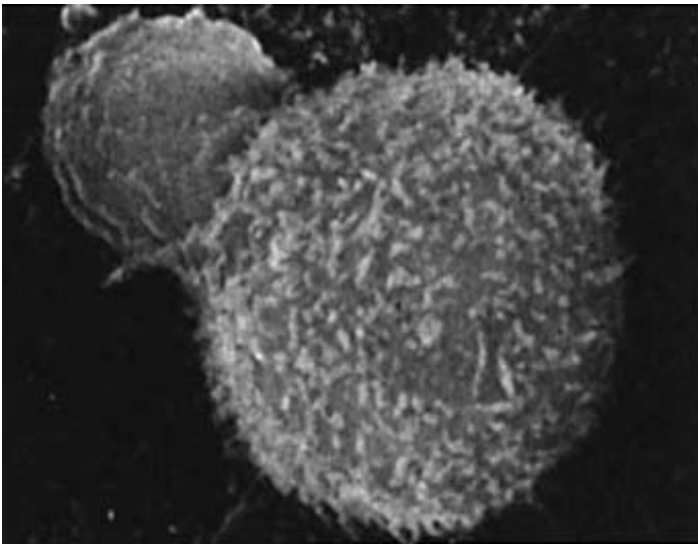
The degree of protection afforded by the action of the immune system against abnormal cells must depend of course on the degree to which the lymphocytes and macrophages can discern the difference between normal cells and abnormal cells. They lymphocytes must be programmed to know which cells to attack and destroy and which to ignore. With different degrees ranging from slightly abnormal to very abnormal, there must be a dividing line.

A factor complicating this otherwise straightforward state of affairs is the similarity of cancer cells to embryo cells. Embryo cells within a pregnant woman are not the same as her own body cells, and indeed are "foreign" to her immune system. The mother's immune system, however, ignores the embryo growth because the embryo cells produce a substance known as blocking factor. Thus even a transplanted fetus not of the woman's own making can survive and grow in her womb. Cancer cells, having reverted to embryo-like form, are capable also of producing a blocking factor which protects them to a greater or lesser extent from attack by the immune system.

An effective immune system at work



A T cell, a thymus-derived lymphocyte, attacks a cancer cell (large sphere), which it identifies by the antigen molecules protruding from its surface.



The cancer cell is dying indicated by the deep folds in its surface membrane, These micrographs were made by Andrejs Liepins of the Sloan-Kettering Institute for Cancer Research.

Thus the efficiency of the body's defense against cancer cells lies not only in the health and vigor of the white cells but also in the proper programming of the lymphocytes and the rest of the immune system by the thymus hormones. In addition, cancer cells can be destroyed by inflammation\* which is a secondary immune response, but it is known that cancer patients with their lowered metabolism are incapable of producing a proper inflammatory reaction. In 1932 Professor G. von Bergmann of Germany stated: "Cancer metabolism takes place once the body is no longer capable of producing an active inflammation metabolism" (*A Cancer Therapy*, Dr Max Gerson).

\*Hyperthermia is a procedure sometimes used as an accessory to other treatment aimed at destroying cancer cells. The entire body is wrapped and heated to increase the body temperature to fever level because it is known that cancer cells cannot endure such high temperatures. Reduction in the size of tumors can be achieved this way but of course cures cannot be.

Inflammation cannot be simulated simply by raising the body temperature, as chemistry changes are involved as well. In real inflammation the fluid which is produced at the site acts chemically against the cancer cell in addition to the effect of the heat.

The thymus gland relies on a rich blood supply, well oxygenated, as do all body tissues, and its function is influenced by secretions of hormones from the other endocrine glands. It has been described already how even the effect of natural light is important to proper function of the endocrine glands. If the thymus is debilitated, which it invariably is in people degenerated, stressed, or sick, the immune system becomes ineffectual.

The majority of people are never in a condition of robust health, and the fact that the "common" cold is indeed so very common, testifies to the marginal condition of the average person's thymus. The general degeneration of the vital organs accompanied by the towered immune function which usually accompanies old age accounts for the increase in cancer incidence in the older age groups.

The thyroid gland is also an important component of the immune system, and it is significant that cancer is most common among hypothyroid people and least common among hyperthyroid people. Thyroid suppressing drugs have been shown to increase the growth of all kinds of cancer.

In kidney transplant operations, the immune system of the recipient must be suppressed by drugs in order to prevent tissue rejection of the new kidney. The incidence of cancer among kidney recipients then increases enormously.

It has been found that the body organs, adenoids, tonsils, and appendix, rather than being useless appurtenances, are in fact, important components of the immune system. Although the body can get by without them, a certain degree of protection is lost. Two researchers, Dr J. R. McVay and Dr Howard Bierman, working independently, reported that cancer occurs more often in those who have had their appendix removed. One may conjecture, at the same time, that internal pollution has led to the infection of

the appendix in the first place, leading then to the development of the cancer milieu. Some carcinogenic substances are conducive to cancer, not because of their influence on tissue cells, but because of their debilitating effect on the immune system. The paralyzing effect of cholesterol on white blood cells has already been mentioned.

When cancer becomes so advanced in a patient to cause severe pain, if pain-killing drugs are employed with resultant further depression of the immune system, the cancer will advance rapidly with little hope for the patient.

In September 1979, the Australian Federal Government, following the lead of USA, Britain and Canada, banned a number of drugs containing methapyrilene, a drug shown to be carcinogenic to animals. The drugs were tranquilizers and medicines for colds and allergies. It is interesting to note that some months earlier, in May, a letter appeared in *Medical Journal*, written by Dr David Horrobin, director of the Endocrine, Pathophysiological Laboratory of the Clinical Research Institute, Montreal, in which he described research with rats in which the growth of tumors was accelerated by tranquilizers. He said urgent investigations were needed in view of the very high levels of tranquilizers used in our society.

Dr Edward Humphries, a veterinarian of the Bureau of Animal Health, also in May 1979, warned that the use of chlorine in water supplies may be lowering people's resistance to a variety of diseases. In a five-year study he had noted a link between the incidence of "Q"-fever among abattoir workers and the chlorinated water supplies in certain Australian country towns. Q-fever did not appear at all among abattoir workers in towns with unchlorinated water. Dr Humphries said that his study supported research by US cancer researcher, Dr Isiah Fidler, of the Cancer Research Center, Frederick, Maryland, who had found a marked depression of white blood cells in animals which drank hyper-chlorinated water.

## **Immunotherapy**

It is now apparent to everyone that surgery, radiation and chemotherapy are only palliative approaches in the treatment of cancer, and that the immune system is the key to completely eradicating cancer cells throughout the body.

Thus immunotherapy has emerged over the past few years as the "new hope". Although immunotherapy had been tried early in the 20th Century, the efforts failed, and so this is the second time around. With greater knowledge of microbiology and immunology, the scientists are more hopeful, though faced with perplexing problems.

The first problem barring the application of immunotherapy as conventionally employed against other diseases is that cancer cells are not all the same, and therefore, just as with the wide variety of influenza viruses, it is not feasible to produce vaccines against them. This puts the entire responsibility of reaction against cancer, when it appears, upon the body's own defenses, and the only potential of immunotherapy therefore, is to somehow boost the general capability of the immune system.

This is easier said than done because, in the first place, the immune system which in most cases appears normal enough, does not seem to always recognize the cancer cells as enemies and may make little or no effort to destroy them, although it is known that lymphocytes and macrophages are perfectly capable of doing so. Immunotherapy technique is to employ various vaccines and other forms of stimuli to encourage the immune system into greater activity.

The sounds reasonable enough because the circulating white cells, although perhaps depleted in numbers, often appear to reasonably perform their other normal functions.

At this point the researchers are stalled and perplexed and the reason for this is that their entire concept, although sensible, is based on false assumptions, which are:

1. That cancer is a local problem wherever it appears in the body.
2. That the patient's body, apart from the cancer, is healthy.

3. That the patient's immune system is normal, or near normal.

None of these is the case, and although the immune system may be partially functional, the thymus appears unable to program it effectively, and so the cancer cells are ignored. So until the activity of the thymus is restored, the cancer cells will escape destruction.

The immune system of a cancer patient is depleted and ineffectual, and to try and stimulate it with vaccines or other artificial methods is like whipping an exhausted horse. Indeed it can be regenerated, but only by removing stress and building up the health of the entire body.

Natural remission of cancer may occur merely by improvement in immune function perhaps brought about solely by alleviation of stress factors. In this case the disappearance of cancer tumors in itself cannot be considered a cure, it means only that the cancer is being held in check by the body's white cells.

To achieve a cure the cancer milieu within the body must be cleared and the entire body restored to vigorous health.

## **The role of hypothyroidism**

The thyroid gland is an important component of the immune system, and it is significant that cancer is most common among hypothyroid people (hypo = low) and least common among hyperthyroid people. Thyroid suppressing drugs have been shown to increase the growth of all kinds of cancer. Dr Broda Barnes said that in cancer transplant experiments with animals the transplant would seldom take unless the animal's thyroid had first been removed.

Hypothyroidism, although generally unsuspected, is very common says Dr Barnes (see book list), not only in the various "goiter belts" around the world but among all populations on high protein diets. Dr Barnes pointed out the observations (1954) of Dr J. G. Spencer, pathologist at Frenahay Hospital, Bristol, England, that the goiter areas of 15 countries and four continents consistently show a higher incidence of cancer than adjacent areas of the same countries, and that Austria with its high incidence of goiter has the highest incidence of cancer of the Western countries.

The majority of people have low thyroid activity due to their diet, says Dr Barnes, but of the thousands of patients he has put on thyroid therapy, not one has developed lung cancer, and only six deaths have occurred from cancer of any kind.

## **Different types of cancer**

It has been postulated that there are as many as one hundred types of cancer and therefore the cancer problem is a very complicated one. On the other hand, sensible analysis of the subject reveals instead that cancer is a single, constitutional complaint preventable by the simple act of purifying the constitution and that therefore the cancer problem is in fact a comparatively simple one.

Primary cancers may make their appearance in any one of a number of sites, the location depending on several factors:

1. The degree of local circulation of blood, which determines the degree of pre-cancer. (See *The Liver and Cancer: A New Cancer Theory* by Kasper Blond, MD, 1955)
2. The location of irritation or injury as a trigger for cell growth.
3. In the case of hormonal dependent cancer, the type of hormonal upset.

## **Cancer of the bowel (colon and rectum)**

This form of cancer is the most common form of malignancy in Western countries, and causes the most cancer deaths. Cancer of the intestine is rare. (See Fig 20.1, appearing earlier in this chapter) There is no

doubt, therefore, that colon cancer is directly attributable to the poisonous milieu in the colon caused by constipation and the residues of the high fat, high protein Western diet.

Countries with a high consumption of beef--Australia, USA, Canada, New Zealand, England, Scotland and Argentina--suffer from a high incidence of bowel cancer. Scotland has the highest bowel cancer rate in the world, with the worst incidence around Aberdeen, the cattle raising center. The Scottish consume 19% more beef per capita than the English and their bowel cancer rate is precisely 19% greater than the English.

Similar to the relationship between beef consumption and colon cancer, there is also a strong relationship between beer drinking and colon cancer.

This latter relationship is held to be accountable for the higher incidence of colon cancer among males.

## Breast cancer

The incidence of breast cancer is much higher in countries where people eat high fat diets. Frequently cysts (soft lumps) wilt appear first but disappear quickly when the diet is rectified.

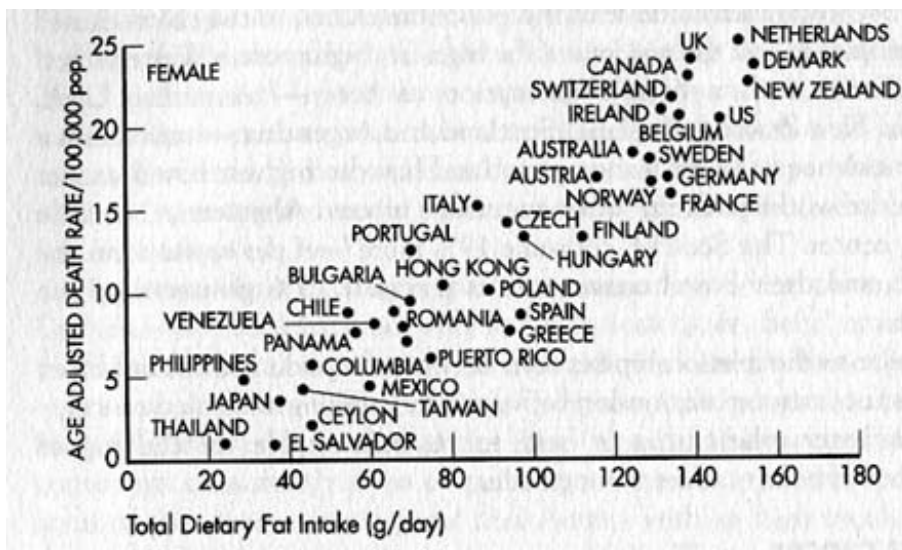
Breast cancer is the number one cause of death in women aged 35-50 years in the USA; Holland and Denmark have seven times the rate of Japan with its low-fat diet.

Oral contraceptives cause 90% of women using them to develop breast cysts within two years. These women have a much greater (260%) chance of developing cancer.

The effect of the Western diet, in changing the type of intestinal bacteria which react dangerously with the bile, has been described. Another effect of this process is that the female hormone, estrogen, is produced. An excess of estrogen induces premature development in young girls. Whereas a hundred years ago girls commenced menstruating at 17 to 18 years, they do so now at 12 or 13. Estrogen is such a potent hormone that a three-and-a-half-year-old girl who had been rubbing her mother's estrogen skin lotion all over herself in a period of two months developed breasts and an adult uterus.

In the USA, Premarin, an estrogen preparation designed to keep women youthful, was shown to increase the incidence of cancer of the uterus by 400% in two years and by 1,400% in seven years. The high estrogen levels result in the cysts and breast cancer mentioned. In the UK, cancer of the ovaries has been linked with estrogen contraceptive pills. The incidence of cancer of the cervix and uterus is twice that of those who use a diaphragm.

Fig 20.5 The effect of high-fat diets on breast cancer rates



Breast cancer mortality (age adjusted) vs per capita consumption of dietary fat, courtesy Kenneth K. Carroll, "Experimental Evidence of Dietary Factors and Hormone-dependent Cancers", *Cancer Research*, Vol 35, page 3379.

Prolactin is a hormone produced by the pituitary gland and is involved in the function of breast tissue and mammary glands of the breast. In tests on rats it was noted that cancer was associated with an increase in the prolactin to estrogen ratio in their bodies. Dr Ernst Wynder in his report to the US Senate Select Committee described a study with a group of nurses who voluntarily adopted a low-fat vegetarian diet. Their prolactin levels decreased 40-60% in four weeks.

At an International Congress of Vegetarians, Dr Kristine Nolfi of Denmark described how she cured herself of breast cancer by adopting a 100% raw vegetable diet. She later established a sanitarium, "Humilgardin" where this diet is employed and consumed by patients and the staff. All forms of rheumatism and arthritis are alleviated, also psoriasis, hemicrania, gallstones, and stones in the renal pelvis and urinary bladder. Loss of hair, fat accumulation and dandruff cease.

## **Cancer of the stomach**

The countries with the highest incidence are Japan and Iceland.

Japanese average an intake of 1 oz of salt per day and have a very high rate of hypertension. Examining the stomach lining of young Japanese men with inflammation of the stomach, observers noted it took two weeks of salt-free eating before the inflammation disappeared.

The rice consumed in Japan used to be dusted with talcum powder to make it look whiter. Talcum is mined along with asbestos. In Russia, asbestos miners have high rates of lung cancer and stomach cancer.

In tests on animals where cancer-producing substances were injected into their stomachs, those animals on a 35% fat diet developed four-and-a-half times more tumors than animals on a 5% fat diet.

The people in Iceland eat a lot of smoked fish and smoked meat. Investigating 1,600 deaths caused by stomach cancer, the highest incidence correlated with the consumption of smoked meat. The carcinogen in smoked meat is called 3-4 benzopyrene. The amount of this carcinogen in 1 lb of smoked mutton equals that in 250 cigarettes. In the coal mining areas of Utah, USA, miners have three times the stomach cancer of non-miners, and eight times the incidence of people in non-mining areas.

The barbecuing of meat has been strongly suspected for years now. Tests on 25 rats fed smoked meat showed they developed tumors and 21 died in 90 days. Nitrates and nitrites are used as preservatives of processed meats, ham, bacon, frankfurts etc. Much of the nitrates' effectiveness depends on its conversion by bacteria into nitrite. The permitted level of nitrite in the USA is 0.2%. Nitrites can be changed in the stomach to nitrosamines, some of which are carcinogens. These have been observed to cause cancer in all laboratory animals. It should be remembered that preservatives work by inhibiting the function of enzymes, and therefore the consumption of preserved foods must inevitably lead to the depletion of enzyme activity in the body.

Researchers at the University of Nevada have found that nitrosamines did not occur in the presence of ascorbic acid (Vitamin C). Nitrates which normally exist in vegetables can be converted to nitrites in prolonged storage. It was recently discovered in Europe and in the USA that commercial beer contained nitrosamines. A paper by B. C. Challis and C.D. Bartlett, organic chemists, Imperial College of London, April 1957, described how nitrosamine formation from nitrates and amines increased tenfold when small amounts of coffee were consumed. Thus Vitamin C would lessen the danger of this combination. Nitrites can also affect oxygen transport when they combine with the iron in the hemoglobin of the blood. It is thought that the high levels of sodium nitrite in the salt used in Japan were partly responsible for their cancer rate.

It has been noted that among Japanese who migrate and live in the USA, the incidence of stomach cancer decreases but the incidence of cancer of the colon increases.

Scientists at the University of Texas report that common seasonings such as cayenne pepper, paprika and particularly turmeric (the main ingredient in curry powder) alter cells permanently by disorganizing chromosomes.

## **Cancer of the liver**

Despite the fact that the liver continually processes all the blood in the body as well as receiving substances directly from the intestine, thus being more exposed to carcinogens and toxins than any other tissue, and despite the fact that liver cells are capable of replicating faster than any others, primary cancer rarely occurs there. However, secondary cancer of the liver is common. Primary cancer of the liver may occur when cirrhosis exists and the liver tissue is attempting to restore itself. Heavy drinkers and smokers are very susceptible.

As is well known, natives of undeveloped countries, who eat more natural food, escape most of the degenerative diseases of civilization. However, among some of these people primary cancer of the liver occurs frequently, and this is directly attributable to the potent carcinogen, aflatoxin, which like the carcinogens used to quickly cause cancer in animal experiments, is powerful enough to do so in the healthy livers of humans. The incidence of liver cancer among natives in Johannesburg is 27 times that of the USA, and in Mozambique is 270 times greater.

The 20% rate of primary cancer of the liver among the Bantu population was attributed primarily to their poverty-restricted diet of corn and corn mush, cooked in iron pots.

Aflatoxin is an excretion of a mould which can penetrate the shells of peanuts and poison them, and is also sometimes found in rice. Aflatoxin increases greatly in rice which has been cooked and kept for later use.

Brazil nuts contain aflatoxin and their importation into Austria has been banned. Peanuts are the worst. In England in 1960, 100,000 turkeys all died of liver cancer when fed mouldy peanut meal. In the tests that followed, calves given aflatoxin, one part in half a million in their food, all got liver cancer in three weeks and all died in 16 weeks. Steers given one part in three million got liver cancer in 16 weeks. Tests on ducks and trout in even weaker concentrations had the same results. With rats, one part in 70 million killed them all with liver cancer in 6-8 weeks.

## **Lung cancer**

Until recently lung cancer caused more deaths among men than any other form of cancer. It now ranks second to cancer of the bowel.

Smoking not only introduces carcinogenic tars and other irritants into the lungs, but also elevates blood fats by its effect on the nervous system and simultaneously reduces oxygen available to the tissues by carbon monoxide poisoning of the red cells of the blood.

However, not all heavy smokers get lung cancer, and at the same time there are many nonsmokers who do get lung cancer. Admittedly lung cancer is so markedly more prevalent among smokers that it is certain that smoking must be regarded as a powerful causative agent, but it could never be said that smoking was the primary cause of lung cancer.

More directly causative of lung cancer is a high fat, high cholesterol diet. In a Chicago survey of 876 smokers, in those with cholesterol levels of 275 mg% (7.0 mm/L) the lung cancer rate was 37 per thousand.\* For those with cholesterol levels of 225 mg% (5.77 mm/L) the lung cancer rate was only five per thousand, but for those smokers with a cholesterol level of less than 150 mg% (3.8 mm/L) there was no cancer incidence at all.

\*These figures were the number of smokers with cancer at the time of the survey. Of the 876 smokers, a far higher number will eventually get cancer.



It is noteworthy that the Japanese, who smoke much more than the Americans, surprisingly have a much lower incidence of lung cancer, and it is further noteworthy that although over a 30 year period the percentage of American males who smoked decreased from 60% to 40%, lung cancer mortality increased three times.

These facts do not exonerate smoking as a cause but it should be noted that the prime causative factor once again is the condition of lipotoxemia.

## **Cancer of the mouth, larynx and esophagus**

This kind of cancer, like all the others, stems from faulty diet and is associated with various factors which provide the necessary local irritation. Heavy drinkers are susceptible and their risk is increased twenty-fold if they smoke as well. In some countries where this form of cancer is common, the irritation is provided by heavily spiced or very hot food.

Cancer of the esophagus is common in certain areas of Iran where the diet consists almost entirely of coarse bread. In this case the necessary condition of pre-cancer would be due not to dietary excesses, but to dietary deficiencies, there being no fruit or vegetables available.

## **Leukemia**

Leukemia is the uncontrolled proliferation of white blood cells in the body and bloodstream. It occurs mainly in young people.

It is known that the incidence of leukemia is very low among primitive natives and vegetarians, and that the disease responds rapidly when a raw, low fat, vegetarian diet is adopted. (See Chapter 2.)

It is also significant that tests in the 1940s and 1950s showed that leukemia patients displayed low levels of Vitamin C. These tests were described by Dr A. Vogt, "Vitamin C Treatment of Chronic Leukemia" (*Deutsche Medizinische Wochenschrift*, Vol 66, 1940), Dr E. D. Kybos, "Large Doses of Ascorbic Acid in Treatment of Vitamin C Deficiencies" (*Archives of Internal Medicine*, Vol 75, 1945) and Dr A. L. Waldo and Dr R. E. Ziff in "Ascorbic Acid in Leukemia Patients" (*Cancer*, Vol 8, 1955).

## **Prostate cancer**

Cancer of the prostate is usually preceded by a benign condition in which the prostate becomes enlarged. The enlargement is caused mainly by accumulation of cholesterol crystals.

## **Cancer of the uterus**

This form of cancer is associated with obesity, and women fifty pounds or more overweight are ten times more susceptible to its development. Overweight diabetics have the highest risk.

## **Skin cancer**

There are three distinct types of skin cancers:

1. Basal cell carcinoma.
2. Squamous cell carcinoma.
3. Malignant melanoma.

The first two are far more common and less dangerous than melanoma because they are less aggressive

and have little tendency to metastasize by way of the lymph or blood circulation.

It is generally accepted that most skin cancers are caused by overexposure to strong sunlight because the cancer appears on the face and other exposed areas of people who spend a lot of time in the sun. As would be expected, the incidence of skin cancer is greater in countries with sunny climates and greater among fair-skinned people than in dark-skinned people.

However, as with lung cancer and other cancer, the incidence of skin cancer more closely correlates with the level of blood fats and cholesterol, and regardless of exposure to sun, skin cancer does not readily occur among people on very low fat/cholesterol diets. As with other cancers, sun damage is merely the trigger effect which initiates cell division.

According to Dr George Engel, a dermatologist in Illinois, the number of deaths from malignant melanoma in the USA doubled in the 25-year period to 1978. As American exposure to sunshine has not apparently increased over that period, the reason for these increased deaths cannot be ascribed to the sun. The same situation exists in Australia, where a recent study showed that melanoma incidence has doubled in the last 30 years.

## **Kidney cancer**

Australia has the highest incidence of kidney disease and kidney cancer in the world. This fact reflects not only the excessive intake of protein, fat and cholesterol in the diet, but also the enormous consumption of analgesic painkillers taken in the form of tablets and powders. High as the general incidence of kidney cancer is, it is ten times higher again in women who take these drugs regularly. (See *Analgesic Addiction*, Chapter 21.)

## **General observations**

A report from Holland said that people living within 150 feet from a busy highway suffered a nine times higher cancer incidence. This would no doubt be due to high levels of carbon monoxide although a report from Japan described high incidence of lead poisoning from exhaust fumes. Remember that carbon monoxide has affinity for combining with the red blood cells to the exclusion of oxygen.

Smokers who smoke filter-tipped cigarettes to avoid the intake of carcinogenic tars still inhale the deadly carbon monoxide, and people in their proximity inhale up to 50% of the amount too.

Dr D. J. Field, *Lancet*, September 21, 1974, reported that polyunsaturated fats inhibit the white blood cells from fighting infection.

Dr R. K. Boutwell, *Cancer Research*, 9:741, 1949: "The stimulating effect of fat on the rate of formation of certain types of tumors is well established".

Dr C. A. Baumann, *American Journal of Cancer* 35:213, 1939: "An increase in the fat content of the diet exhilarated the appearance of tumors due to ultraviolet irradiation (skin cancers)."

Dr H. P. Rusch, *Cancer Research* 5:431, 1945 showed similar results in animal tests with ultraviolet rays (as in sunlight) when their diets were high in fat.

Dr Ernst Wynder, *American Health Foundation*, stated: "Both epidemiologic and animal data suggest that colon cancer is due largely to high fat consumption".

Dr E. R. Pickney, *American Heart Journal* 85:723, 1975: "There is certainly a reasonable epidemiological association between a diet high in polyunsaturates and the increased incidence of cancer (especially gastric) in humans." He went on to say that his research showed that 78% of people who used more polyunsaturated fats showed marked "clinical" signs of aging and that 60% had had skin lesions removed because of suspected malignancy.

It appears that polyunsaturated fat inhibits the function of the white cells. It has a discernible effect on red blood cells, causing them to aggregate, ie. stick together, restricting circulation.

A *Lancet* report, August 16, 1969, stated that in the UK on the average a person annually consumed 3 lbs of chemicals, not naturally present in food. Dr Ben Feingold of the Kaiser Permanent Medical Center, San Francisco, author of *Why Your Child is Hyperactive*, puts the American figure at 5 lbs.

## Medical treatment of cancer

"Considered in its broadest terms, orthodox cancer treatment today is a failure and a disgrace. Contemporary cancer management in a number of respects, constitutes professional malpractice."--Dr Brian A. Richards, in his book *The Topic of Cancer* (1982).

In a lecture at the American Cancer Society's annual Science Writers' Conference in New Orleans in 1969, Dr Hardin Jones of the University of California Department of Medical Physics, said:

"My studies have proven conclusively that untreated cancer victims actually live up to four times longer than treated individuals. For a typical type of cancer, people who refused treatment lived for an average of twelve and a half years. Those who accepted surgery and other kinds of treatment lived an average of only three years . . . "

In a paper titled "Cancer Cures More Deadly Than Disease", Dr Jones said further:

"It is utter nonsense to claim that catching symptoms early enough will increase the patient's chances of survival. Not one medical scientist or study has proven that so in any way.\* Furthermore, untreated breast cancer cases show a life expectancy four times longer than treated ones. My wife and I have discussed what she would do if breast cancer were diagnosed in her, and we both agree she would do nothing except to keep as healthy as possible. I guarantee she would live longer. For not only does radical surgery or chemotherapy do nothing to prolong a cancer victim's life, but that same person will, in most cases, live a lot longer if he or she refuses treatment. Beyond a shadow of doubt, radical surgery on cancer patients does more harm than good."

\*Because if a patient remains free of symptoms for five years he or she is considered to be "cured" of cancer, medical statistics of cure rate do not reflect the true situation. When relatively harmless skin cancers are included as well, the overall cure rate of cancer appears much better still. It is obvious that the earlier cancer is detected in the first place the more chance a patient has of meeting the five-year criterion, but in fact this does not extend the patient's life, it merely makes the statistics look better.

The continued failure to effectively combat cancer, despite the repeated optimistic promises of new breakthroughs has reduced the credibility of the medical profession, but this failure is made to look less dismal by the misleading survival rates published by medical authorities.

Conventional medical treatment of cancer is a failure for the obvious reason that it is not addressed at removing the cause but merely at destroying one of the symptoms, ie. the cancer growth. This absurdity 'is due to the steadfastly held view that cancer occurs as a local malfunction of cell growth caused probably by a chance mutation in an otherwise healthy body. The other symptoms of weight loss, fatigue, poor skin tone, etc. are thought to be caused by the tumor growth.

The three basic medical treatments are surgery, radiation and chemotherapy, all of which are traumatic and more often than not accelerate the decline of the patient.

Whereas there may be something gained by the surgical removal of a self-contained tumor inasmuch as stopping its parasitic action, in most cases there are millions of stray cancer cells already circulating in the body and usually metastases already established. When a surgeon says "he got it all" he is being very optimistic.

Dr Robert Bell, MD, FRPS,\* formerly a cancer surgeon who abandoned surgery when he realized its

futility against cancer and devoted the rest of his life to natural healing, wrote: "it is of no more avail to excise the local manifestation of blood contamination--which cancer undoubtedly is--and thus expect to eradicate the constitutional affliction, than it is to cut out a piece of dry rot in a beam without adopting means to remove the cause of the mischief".

\*Dr. Bell practiced medicine from 1870 to 1928; he was a researcher ahead of his time and the author of several books (see list). He originated microphotography for cellular research, and identified the anaerobic nature of cancer cells, describing how cancer cells arose from cells which were originally normal. He abandoned surgery in 1894 and thereafter was constantly embroiled in controversy with the medical establishment in England. Despite malignment from this quarter, he was highly esteemed and was offered a knighthood by King Edward VII, which he graciously declined.

Further-more, surgery or biopsy, because the subsequent healing process causes de-differentiation of tissue cells, can actually initiate cancer growth. In such cases, said Sir James Paget, "The surgeon has unwittingly supplied by the local injury what was needed for the production of a cancerous growth".

After surgery, radiation and/or chemotherapy is the next step, because even in "terminal" cases, it is hoped that by retarding the tumor growth, the patient will gain extra time. Radiation usually diminishes the size of the tumor, and this is encouraging to see, but once again this is only the diminution of a symptom. While this is going on, destruction occurs to normal tissue as well, and enormous numbers of circulating white cells of the immune system are destroyed.

Said Dr W. A. Dewey, Professor of Therapeutics, University of Michigan: "As radium is directed only at the end products of cancer, it is not only useless, but it destroys the healthy tissue around the tumor, destroying blood vessels and protective glands which are most necessary to the healing process, and chases the disease to some internal organ, thus so complicating the case that cure is impossible".

Chemotherapy is even worse. Senator Hubert Humphrey before he died, called it "death in a bottle". The idea of chemotherapy is to delay cancer growth by preventing replication of the cells, and the so-called advantage of the chemicals is that they circulate through the entire body so reaching all sites of cancer growth whether detected or not. The disadvantages are that all other replicating normal cells are affected as well, resulting in hair loss and ulceration of various tissues, accompanied by nausea, vomiting, vertigo and so on. At the same time, the already diminished immune system is further destroyed.

It is hard to believe. The medical authorities and the chemical manufacturers admit that the chemicals used can actually cause cancer, and the pharmacists who handle them wear special protective clothing and masks in fear of their own lives. These frightening chemicals are then purposefully injected into the very bloodstream of the cancer patient, whose wretched liver now has to try to detoxify this further assault. As the patient's survival depends upon restoration of the liver and the functioning of the immune system, chemotherapy is not only bound to fail, it virtually guarantees the patient's further decline.

On chemotherapy, Dr Charles Huggins, Nobel Prize winner, of the University of Chicago, said: "I am very much against chemotherapy generally. It simply makes the patients too ill. Remember there are worse things than death. One of them is chemotherapy".

Sometimes radiation and chemotherapy are used together, and this procedure is the most lethal of all, but is commonly used by doctors obsessed with the destruction of cancer cells regardless of all else. Hope rises as the tumor diminishes in size, and then crashes as the inevitable regrowth appears.

The entire medical show, nothing less than ridiculous when honestly assessed, is of course fearfully expensive in money, and in terms of grief and despair, immeasurable.

At the Annual Scientific Meeting on the subject of cancer at Sydney University in November, 1980, Dr P. Shubik of USA was frank. In his opening remarks he said that "there were no cancer experts any more in the USA". What he meant was that cancer has the medical profession perplexed and confused. There is no medical cure presently foreseen, and hope lies mostly in extending the life of patients by improving current methods of treatment. During the meeting, the subjects of diet, physical fitness, exercise and stress were not discussed except for one "workshop" on diet which only two doctors attended. The immune system was discussed once, but not as a serious cancer factor.

More recent are reports of the work of Professor John Williams' team at the Australian National University in Canberra. Hoping for a breakthrough, they are seeking methods of arresting cachexia, the wasting of the body which occurs in the final stages of cancer. A medical breakthrough will only be achieved however when the fact, known for over a hundred years, is accepted that not only cachexia, but the tumor, the pre-cancer and the "cancer milieu" are all stages of the one degenerative process.

Why are people still ignorant of medical facts known for one hundred years or more?

In addition to Drs Koch, Gerson and Moerman, there have been a whole succession of doctors going right back to Dr Lambe in 1809 who have successfully treated cancer by helping their patients correct the constitutional disorders of their bodies.

Despite their proven methods, these doctors could never break the barrier of prejudice historically surrounding the medical profession, but instead were persecuted in varying degrees as troublesome nonconformists. Such rejection is a peculiar part of human nature and has always been encountered by innovators in all fields.

For a new method to be accepted by the medical establishment, the fact that it works is almost irrelevant. Unless research is on an "in" subject and conducted on "approved" lines, the authors of research papers have great difficulty having them printed, particularly in the more conservative medical journals. Dr Gerson submitted dozens of papers on cancer therapy to the Journal of AMA but none were accepted. Dr Koch and Dr Moerman, along with Dr Hoxsey and many others, received the same rejection.

This is why today the medical profession is so ignorant of much vital information, not only information on cancer. The vital facts of diabetes and heart disease also, known for over one hundred years and scientifically proven in the 1930s by Dr I. M. Rabinowitch and in the 1940s by Dr Lester Morrison, are still unknown to most doctors.

This opposition and cover-up is due not only to conservatism and vested professional interests, it is professed policy of the drug and chemical corporations together with such food industries as the meat, dairy and sugar industries who between them control most of the funding for medical research.

Perhaps Dr Gerson's story provides the best example. The cure rates he achieved among so-called terminal patients were phenomenal, but he could not get the recognition in the USA that he had achieved in the 1920s and 30s in Europe. Dr Gerson, who had cured the wife of Dr Albert Schweitzer of tuberculosis, and Dr Schweitzer himself of diabetes, was described by Dr Schweitzer: "I see in him one of the most eminent geniuses in the history of medicine. He possessed something elemental. Out of the deepest thought about the nature of disease and the process of healing, he came to walk along new paths with great success."

Gerson got as far as presenting five "hopeless cases" completely cured of cancer to a Senate subcommittee in Washington in 1946 which was evaluating cancer research. The proposal for support for Gerson was narrowly defeated after heavy pressure from the medical lobby.

On April 28, 1981, a significant event occurred in Sydney, Australia. Dr John McDougall of Honolulu delivered a public lecture on the subject of diet and breast cancer. In fact, he is researching the subject on a medical grant from the Straub Foundation of Honolulu. He is the first person to receive such a grant; in the past not even Linus Pauling, a double Nobel Prize winner, could do so, so strongly against this sort of research was the establishment. Dr McDougall's dietary approach is based firmly on the Pritikin diet, and he is showing very good results with his patients.

A valuable step forward, and interesting reading, is the US National Research Council's comprehensive report, *Diet, Nutrition and Cancer* (1982). Unfortunately, the viewpoint of the committee which prepared the report is still wrongly orientated looking for "mutagens", etc, and no proposal is made of diet and nutrition as a cancer therapy.

Meanwhile, the cancer death rate continues to increase. In 1971 when the Nixon administration declared war on cancer, one in every six American deaths was due to the disease. Billions of "research" dollars

later, in 1978, the rate had risen to one in five, and at this rate of increase, by 1988 it will be one in four.\*

\*Update 1996: the 1988 prediction proved correct--the present rate is one in three.

Hopefully the orthodox medical establishment will eventually get the message. In her book *Cancer Under Siege* (1975), Dr June Goodfield quoted Dr Robert Good, director of the Sloan-Kettering Institute as saying: "When we look back at what we do to cancer today, chopping it out, burning it out, poisoning it out, it will all seem so crude."

Dr Good, why do you think Dr de Lacey Evans gave up surgery a hundred years ago?

Let Dr Kasper Blond sum it up. He said: "The problem of cancer must be considered as an insoluble medical problem, because it is essentially a nutritional and social problem: in other words a problem of prevention. Such a problem cannot be solved by animal experiments, vaccines and drugs. Statisticians, pathologists, biochemists and doctors CANNOT SOLVE SOCIAL PROBLEMS."

## **Orthomolecular Medicine**

Realizing the true nature of cancer and other diseases, many progressive doctors avoid the use of drugs, and concentrate on correcting the body chemistry of their patients. Whereas the patient is given dietary instruction based on the results of allergy tests (which are open to doubt), the main theme of orthomolecular medicine seems to be the prescription of large quantities of artificial vitamins and minerals which blood tests have indicated to be supposedly deficient. Orthomolecular medicine, using vitamins and minerals therapeutically instead of drugs, is a good attempt by medically trained people to help the body help itself.

In addition to vitamins and minerals, other scientific modalities are often employed in orthomolecular medicine such as supplementary enzymes, herbal medicines, hyperbaric oxygen, ultraviolet irradiation of blood, chelation, DMSO and so on. The relative merits of such modalities are open to question in light of the fact that in most cases the same or better results can be achieved by strict diet in a very short time. However, no doubt in certain cases, modalities such as these help support life until failing body systems are restored. As mentioned, Dr Gerson found it necessary to provide supplementary enzymes in the form of calves' liver juice and to use coffee enemas to stimulate the removal of toxins.

Orthomolecular medicine although imperfect, has achieved very good results, and for people incapable of maintaining a correct diet, it will be a big help. In respect to cancer, the only consistent successes achieved by orthomolecular doctors all depend on nutrition, modelled on the Gerson diet as a basis.

## **Spontaneous (natural) remission of cancer**

On rare occasions, to the surprise and sometimes disbelief of doctors, well established cancer growths in a patient mysteriously disappear. Believing such cancers to be "incurable", sometimes a doctor will reverse his original diagnosis and say the patient never really did have cancer in the first place. However, it is now accepted that such remissions do occur--probably more often than generally believed.

In his valuable book *Victory Over Cancer* Cyril Scott quotes surgeon Hastings Gilford stating in 1925: "Though cancer is so commonly regarded as inevitably fatal, many cases are recorded of its 'spontaneous' disappearance--and nothing can be more certain than that these recorded cases are very few in comparison with those which are unrecorded". Hastings Gilford then listed the names of many eminent men who have testified to spontaneous cures of cancer. Among the names were Paget, Brodie, Muller, Sauerbrach, Gleitmann, Rohdenburg and Lomer. Lomer had recorded 213 cases and Rohdenburg 302. A Dr E. F. Bashford provided a list of 13 other eminent doctors, all who had observed spontaneous healing of tumors.

Scott then quotes Dr Georgina Luden (USA) who said: "The importance of this fact can hardly be over-estimated. It is a proof positive that the human body can wage a winning fight against malignancy under the most untoward conditions . . .

"Since outside aid has proved useless, the victory must have been won by inside means. Changes in the body chemistry, resulting from increased or renewed activity of organs by which the chemical condition in the body is regulated, seem to be the only available explanation, since the chemical composition of the blood must influence the body cells."

Now remember--these spontaneous cures happened by "accident", not by design, so that a patient today who knows exactly what to do must have an infinitely better chance of achieving success, ie. complete spontaneous remission.

Sir Alexander Haddow, a medical leader in cancer research, always said the key lay in finding out why spontaneous remission occurred. He was right.

## Cases of recoveries

The chances of curing cancer (ie. achieving natural remission) hinge on three main factors.

1. The remaining capability of the liver and other vital organs.
2. The extent to which the immune system can be regenerated.
3. The fighting spirit of the patient.

If proper metabolism of nutrients can be restored, auto-intoxication stopped, and at the same time the detoxifying capability of the body increased to exceed the production of toxins by the cancer cells, then favorable blood chemistry will be regained and cachexia arrested.

The improved circulation and increased oxygen permeating the body acts then to retard and maybe arrest the growth of tumors and at the same time assists the immune system to regenerate.

The outcome of the fight depends on whether or not the combination of natural anti-tumoral chemistry in the body plus the destructive capability of the immune system, exceeds the capacity of the cancer cells to multiply. The most important factor is not the extent of the cancer, but the regenerative capacity of the body and the extent to which this can be assisted. In a critical situation it appears that the anti-tumoral effects of various herbal extracts can be of vital assistance.

On the other hand, too rapid disintegration of cancer tissue can produce toxins faster than the body can expel them, and perhaps kill the patient. This is the reason that cancer therapists employ coffee enemas which stimulate the excretory function of the liver. It is thought that in some cases the surgical removal of an easily accessible tumor may favor the balance of factors involved.

There have been many cases of full recovery from cancer. Most have been achieved by diet.\* Some have followed surgery, some have followed vitamin therapy, while others have resulted even from faith healing, meditation and various folk medicines.

\*Dr D. T. Quigley of Nebraska, an oncologist for over thirty years has stated: "Cancer never grows in healthy tissues but always in previously diseased tissues." He told the American Academy of Applied Nutrition that in more than thirty years of practice as an oncologist, not one of his patients who had followed his dietary recommendations had had a recurrence of cancer.

Dr Walter Ermer, Executive Director of the International Health Council, reported a survey completed in 1976 on survival rates of advanced cancer patients, comparing patients on nutritional therapy with those on conventional therapy. The survey showed that patients with early, or pre-cancer who adopted dietary therapy all survived and of advanced, so-called terminal cases, 86% survived, whereas of matched patients on conventional therapy only 6.4% survived, (From *A Program for the Prevention and Early Detection of Cancer*, International Health Council Booklet No. 110, Brea, Ohio.)

There are many cases of spontaneous (natural) remissions which have occurred for no apparent reason at all.

Obviously, in all of these cases, one or more of the influences we have discussed have changed

sufficiently to allow the natural body functions to reverse the cancer process. There is no doubt that the faith healing cures occurred primarily because of the patients' improved state of mind and the subsequent strengthened immune responses. The apparent medical cure would be accountable perhaps also to confidence inspired by the surgeon, relief from a stressful situation, combined with the benefits of rest and the adoption of saner living habits.

In other words, **all cures of cancer are achieved by the body itself**, when given the chance to do so.

The purpose of dietary methods, combined with correction of other environmental factors is **purely and simply to arrange circumstances favorable for a spontaneous (natural) remission**. And having achieved such a remission, and knowing how and why it occurred, there is no need to wait five years before calling it a cure.

Now that the physiological effects of diet, physical exercise, stress, rest, sunlight and so on are more fully understood, they can now be properly considered as interrelated instead of separate factors. Particularly with cancer, every single component involved must be corrected simultaneously to ensure best results.

Francis Chichester's bout with cancer is a classic example of all these factors. He devotes two chapters of his book, *The Lonely Sea and the Sky* to describing his ordeal. He says:

"After the last sail in Figaro, I had a desperate attack of worry. I was struggling hard to make my map business pay. It was not big enough to pay for the new talent it needed in both the sales and the production departments, but it was too big for me to provide all the ideas as well as the sales drive needed. Now I had this ghastly load of a new boat added, with all the extra work of planning it, and visiting it in Ireland. I had a nightmare fear of not being able to sell Gipsy Moth II, and of being landed with two yachts. It was too much to bear. The trouble was that by the end of the Fastnet I was tired out. If only I had laid off everything for a week, I should have regained my strength to cope with things."

Cancer of the lung\* was diagnosed soon after this and the diagnosis confirmed by five different doctors. He was told his only possible hope was to have one lung removed immediately. He was booked into hospital for the operation but was in such a low state that the operation was postponed. A little later Chichester felt an irresistible urge to go to the south of France and so went there with his wife. In the town of Vence he became so ill that a doctor was summoned, Dr Jean Mattei. Chichester relates:

\*Chichester was a nonsmoker.

"He examined me and said 'Ce n'est rien, and if you follow my treatment you will be climbing up those mountains in three days' time.' The fantastic thing is that I did, in fact, climb up the Baou Blanc in five days' time. At 2,200 feet it may not be much of a mountain, but it was the most wonderful climb I ever made.

"What I regarded as a miraculous chain of events had started in London when I felt the urge to go to the South of France. There I reached a doctor who had been considered one of the cleverest lung physicians in Paris before he settled in Vence; also I fetched up in a town which had been considered a health resort, with a magic quality of air for lungs, since the time of the Romans. How did this thing come about? Sheila said that the doctor gave me back my confidence, that my illness was already on its last legs.

"For myself, I think that some part of my body had ceased to function, that the doctor had correctly diagnosed what this was, and supplied the deficiency. To me he was a wonderful man; short, nuggetty, fit, with terrific energy exuding strength and activity. He never seemed to stop work, seeing thirty patients a day at times. I heard tales of his sitting up all night with a seriously ill patient, for two nights running.

"It was in April when I fell into the good doctor's hands. In June I accepted an offer to navigate Pym in the Cowes-Dinard race." (That was in 1959.)

Of his wife, Chichester says:



"She has a strange and amazing flair for health and healing. She believes most strongly in the power of prayer. When I was at my worst, she rallied many people to pray for me, my friends and others. Whether Protestants, Roman Catholics or Christian Scientists, she rallied them indefatigably to prayer. I feel shy about my troubles being imposed on others, but the power of prayer is miraculous. Hardly anyone would doubt its power for evil--for example the way Australian Aborigines can will a member of their tribe to death; so why should its power for good be doubted? On the material side I believe that fasting is the strongest medicine available and that it played a very important part in my recovery. I believe that my being a vegetarian for preference helped a lot."

Unfortunately, Chichester's story has an unhappy ending. He was an intelligent, courageous man, health conscious and disciplined, but at the same time badly misinformed on matters of health.

In his book, *Gipsy Moth Circles the World*, he described his food supply for his 1966 voyage. The food was carefully selected on the basis of his diet in England.

The food list is a dietary disaster, obviously based on the fallacious belief that sugar enhances energy and endurance. Although he described himself as a vegetarian, in fact he was not, because he ate a lot of fish, eggs, cheese and milk. In addition his diet contained a preponderance of refined carbohydrate in the form of sugar, chocolate, honey, syrup, marmalade, jam, sweet puddings, cakes and biscuits, honey bars, glucose tablets, liquor and soft drinks, plus canned and dried fruit. On top of all that he took large quantities of butter, oil and nuts. Ketchup, yeast and coffee were further accessories.

And although he had written a book on physical fitness, it was a subject he did not understand. His recommended exercise program does not achieve the protective "training effect" of aerobic exercise.

If, in addition, you add the unrelenting stress to which Chichester subjected himself throughout his entire life, then it is clear that out of the three major cancer factors he failed in all three.

Thus, despite having achieved complete remission of his lung cancer in 1959, Chichester's mode of life and diet was one which almost guaranteed a further onset. He remained free of cancer until 1971 when it was found he had cancer of the spine. There was no recurrence however, of lung cancer.

He refused to rest--it was not in his nature--and he died aged 70, in August 1972.

Chichester's demise was tragic; it was a case of good intentions and dedication ending in disaster because of misconceptions. His recovery from lung cancer had been assisted by fasting but he did not realize why. He placed great importance on physical fitness but did not understand the physiology involved. He felt that the prayers of his friends had assisted in his recovery but did not understand the physiology of stress.

It should be realized that for prayers to work as in this case, it is necessary for the patient to be aware of them and so feel the encouragement and morale boosting of his friends. Chichester's reference to the bone pointing rituals of Aborigines is valid, but they too, like voodoo, only work when the victim is aware. The influence for good or evil functions by way of the subject's own mind.

Travelling by bus recently from Brisbane to Surfers Paradise I chatted with the driver of the bus most of the way, for an hour or so. He told me of an incident he was involved in at Cairns in Queensland a few years ago to do with an Aborigine wasting away as a victim of a 'bone pointing' ritual. The Aborigine was a town dweller but still strongly influenced by tribal ceremonies and beliefs and was reduced to a dying condition.

The driver, in collaboration with some friends, contrived to perform an operation on the stricken man whereby they actually made an incision in his side, and by sleight of hand produced a piece of bone. Having convinced the man that the harmful influence was gone, he rapidly regained good spirits and good health.

The victim in this case did not have cancer (at least not in the accepted sense) but he was being destroyed by hormonal disruption of his internal milieu just as surely.

Another case is Dr Ian Gawler, a veterinarian from South Australia who was pronounced cured of cancer throughout his body after having been told by a specialist in 1976 he had only two or three weeks to live. The case was described in an article in the *Medical Journal of Australia* written by Dr Ainslie Meares.

Dr Meares said: "This young man has shown an extraordinary will to live. He has consistently maintained a rigorous discipline of intensive meditation from one to three hours daily.

"He has developed a state of calm which I have rarely observed in anyone, even in oriental mystics. It would seem as if the patient has let the effects of the intense meditation enter his whole experience of life. His extraordinary low level of anxiety is obvious. It is suggested that this has enhanced the activity of his immune system by reducing his level of cortisone."

Dr Gawler, the patient, said he believed the cancer was the physical manifestation of disharmony within. "I believe that the disease is the end stage of your soul trying to tell you something is wrong."\*

\*Dr Gawler also incorporated strict diet in his recovery program.

In the USA, former Major-General John Medaris made a similar recovery. He said, "People who have a positive fighting spirit and who don't give up hope stand a much better chance of fighting any disease. If you're not at peace with yourself and God, if you're mixed up inside and have inner conflict, your healing is adversely affected".

One of Major-General (later an Episcopal minister) Medaris' physicians, Dr James Maxfield of Dallas said, "It's unusual for a man to have three types of cancer and open heart surgery and still be going strong. There certainly is a factor of faith in his case".

Actress Gloria Swanson, at 84 a busy sculptress and artist, described in an interview with the British magazine *Here's Health* (May 1979) how fifty years previously she had a tumor on an ovary which disappeared of its own accord after she gave up eating meat in 1928. She had maintained a strict natural lifestyle ever since and said, "You can cure anything through food. You must keep the body clean inside and it will heal anything--it repairs itself".

Nearly all the people I have known with cancer are now dead and every one of them erred badly in at least two out of the three lifestyle factors.

I have described how my first wife's lifestyle led to migraine, peritonitis, asthma and heart disease and how she recovered from these. What I did not mention was a skin cancer on her cheek which puffed up like a small sultana. Even though she did little exercise, the adoption of the Pritikin diet alone was sufficient to cause the skin cancer to regress in about five weeks and completely vanish. We lived apart and I could not strictly supervise her diet, but it is significant that on one occasion when she felt depressed she partially abandoned the diet and I could tell simply by the reappearance of the blister-like cancer. She responded to a gentle pep-talk and returned to her reformed diet, whereupon the cancer once again regressed and vanished in four weeks.

Dr O. C. Simonton, formerly chief of radiation therapy at the USAF Medical Center at Travis Air Force Base has used psychology successfully in slowing and arresting the growth of cancer. The first patient he treated this way was a 61-year-old man with throat cancer so severe that he could hardly swallow liquids. Dr Simonton said, "I had him relax three times a day and mentally picture his disease. I had him visualize an army of white blood cells coming, attacking and overcoming the cancer cells. The results of the treatment were both thrilling and frightening. Within two weeks his cancer had noticeably diminished and he was rapidly gaining weight. The man had a complete remission".

His findings are the same as Dr Le Shan's. He says cancer patients often have a low self-image, with feelings of loss and hopelessness, have trouble venting emotions, especially hostility, and feel they have no reason for living. But he declares: "You are more in charge of your life--and even the development and progress of a disease, such as cancer--than you may realize. You may actually, through a power within you, be able to decide whether you live or die."

Dr Simonton and his wife Stephanie produced a book called *Getting Well Again* (Cancer Counselling and Research Center, Fort Worth). The book has been highly praised by none other than Dr Hans Selye, the author of *Stress Without Distress* referred to in Chapter 8. In part Dr Selye said, "The authors appear to have caught the very essence of the stress concept, especially as it concerns the goal of overcoming cancer. Since I myself have endured and overcome an allegedly incurable cancer by means of a code of behavior very similar to theirs, this opportunity to express my admiration for the Simontons' volume gives me great pleasure".

And from a news article in the Sydney *Sun Herald*, September 16, 1979 we have this interesting report:

"Dr Losang Dolma, a 45-year-old Tibetan lady doctor, now practising in India, claims to cure 80% of cancer cases she treats. Her treatment for cancer involves the use of precious stones, powdered and made into pills. Thus the treatment is very expensive." (*And therefore impressive* --Author.)

Dr Dolma presented a paper at the World Health Organisation Conference on Asian medicines in Canberra, Australia.

Commenting, Dr Brian Furness, Director of Health Services at the Australian National University, said, "There is a great storehouse of information in Tibet that is unknown in the West. In all humility we cannot say what is going on". A spokesman for the Australian Medical Association was quoted--"It may seem out of this world, but we are not disposed to ridicule it. We are prepared to listen and learn." The director of the Cancer Council of NSW, Dr Gordon Sarfaty was reported to be reluctant to comment without knowing the full details, but said the use of jewelry seemed "a far-fetched notion."

I would like to add the comment that being far-fetched and expensive is the reason that it works, at least with Orientals.

Two significant points are displayed by this report, both encouraging:

1. Further substantiation of the profound influence of psychological factors in the onset and remission of cancer.
2. The willingness of some doctors to investigate "unorthodox" methods of treating disease.

It should be noted that when complete remissions of cancer are achieved using psychological means such as those employed by Dr Simonton and Dr Dolma, such remissions cannot be accepted as cures because, unless the cancer milieu within the body has been rectified, degeneration of the body will continue and reappearance of cancer is always possible.

In the 1960s Dr Joseph Issels, at his Ringberg-Klinik in Germany, proved a 17% cure rate in the many "hopeless" terminal cancer cases treated there. His story is told in the book *A Time To Heal* by Peter Newton-Fenbow (Souvenir Press, 1971). Newton-Fenbow achieved a complete remission of widespread "terminal" cancer while following Dr Issels' treatment. Dr Issels' concept of the cancer problem described in his book, *Cancer--A Second Opinion* (1975) is as follows:

"The conventional idea on cancer is that it is a local disease affecting--initially--one part of the body and requiring localized therapy in the form of either surgery or radiation or chemotherapy or a combination of these. This is not my opinion. Here in the Ringberg-Klinik we believe that cancer can never occur in a healthy body. A healthy body is in the position to recognize the cancer cells and to reject them. However, the defense mechanism of the body can become damaged in many ways and will eventually lose the power of being able to reject the cancer cells. At this stage we would say that the body now has the ability to develop a cancer tumor. We therefore believe that the tumor develops because of an illness of the entire body and therefore the tumor is a symptom only of the body's chronic illness.

"Therefore a purely localized therapy which concentrates upon the removal or destruction of the tumor itself will not be highly effective. It is also necessary to treat the entire patient."

Issels' treatment combined conventional treatment with a form of immunotherapy with which he endeavored to restore the action of the body's immune system. He was emphatic that the patient should be

fully informed, and said, "In the twenty years of experience with the so-called incurable, I have seen what reservoirs of undreamed-of strength and courage can be drawn upon, even in terminal cases by the adoption of a positive attitude. I have found that a patient, previously depressed and without hope, has started to live again, provided he has had the opportunity to talk about his complaint and its implications to the doctors and his relatives."

Diet was considered important and was carefully composed with a view to wholesomeness. Here is where Issels erred badly when assessed from the Gerson viewpoint, because although the Klinik diet excluded ham, bacon and pork, it contained nuts, yoghurt, eggs, vegetable margarine, cheese, meat, fish and honey. Thus the worst cancer factor--lipotoxemia--would still substantially remain, particularly when walking was only mildly encouraged. Notwithstanding these faults, he achieved comparatively excellent results. In 1969 Professor John Anderson of Kings College Hospital, London, visited Issels' Klinik and stated:

"Based on a survey of the clinic and its patients and on statistical evidence about the survival of these patients, I am of the considered opinion that this is a new approach to cancer treatment and appears to be a considerable improvement on what is usually offered . . . Some of the cases I saw would have been regarded as hopeless by physicians in the United Kingdom . . . The Issels' approach to the treatment of cancer is a unique and pioneering solution to a very difficult problem . . . Dr Issels is an able physician, a shrewd and penetrating clinician . . . There can be no doubt that he is genuine in what he does and the results he gets . . . He is undoubtedly producing clinical remissions in patients who have been regarded as hopeless and left to fall back on their own resources."

Dr Denis Burkitt supported Professor Anderson's recommendation that Issels' methods be fully investigated, but they received no support and nothing ever came of it.

Preceding Dr Issels in Germany, and in the USA later, Dr Gerson's success in achieving complete remissions of cancer was much greater because his dietary methods were much better. Full details of case histories with photographs appear in Dr Gerson's book, *A Cancer Therapy--The Results of Fifty Cases* (Totality Books, Delmar, California, 1958).\*

\*Obtainable from the Aquarian Book Co Rosebery, Sydney and Gerson Foundation.

Both Gerson and Issels fought against the blind rejection of the "establishment" and were both supported by Dr Albert Schweitzer. On their last parting, Dr Schweitzer said to Issels, "Now colleague Issels, I must return to the Wild, but you must return to the Jungle!".

New York journalists are supposed to be hard-bitten and cynical, and when one of them set out to expose Gerson as a fraud, he not only found Gerson to be genuine, but ended up writing a book eulogising him. The book is *Has Dr Max Gerson A True Cancer Cure?* by S. J. Haught (London Press, also Major books, Canoga Park, California, 1962, 1976). \*

\* Now published by the Gerson Foundation, Bonita, California, under the title *Cancer--Think Curable!*

Dr Eva Hill of New Zealand who used methods similar to Gerson's to cure her own malignant cancer, achieved in New Zealand similar degrees of success with patients, and of course, the same inevitable rejection by her "peers". Her book, written in conjunction with John Barrett is titled *Cancer and Cure--A Doctor's Story* (Bachman & Turner, London, 1976).

There are a great number of books describing natural cancer cures, many of which have been written by medical doctors who have actually cured themselves. A list of the books known to the author, which have provided him with a great deal of information, appears at the end of this chapter.

Actor Steve McQueen nearly made it. With only a predicted few weeks to live, he went to Mexico and undertook a dietary based "alternative" medicine therapy for his widespread cancer. He made a steady improvement, and after three months he appeared on Mexican TV and thanked the people of Mexico for the freedom of alternative medicine doctors to practice there.

As he got stronger, McQueen became impatient and decided to undergo surgery at another hospital in order to more quickly rid himself of the cancer. Unfortunately, five hours after the operation, McQueen died of heart failure caused by a blood clot from the surgery.

A happier story is that of 48-year-old Dr Anthony Sattilaro, President of the Philadelphia Hospital, USA, who like Dr Eva Hill also achieved a complete cure. The story first appeared in the *Saturday Evening Post*, September, 1980. Dr Sattilaro's case is a classic--full of drive, he consistently overworked; always under pressure, he ate "on the run" during the day, and indulged in fine restaurant foods in the evening.

In May 1978 he decided to have a check-up, and the first x-ray disclosed a large tumor in his left side. A bone scan revealed cancer in his skull, right shoulder, two backbones, sternum and a large tumor in the sixth left rib. Further tests showed cancer of the testicles and the prostate filled with it.

Although his survival chances were rated at zero, he underwent surgery and hormone treatment. His weight increased from 145 lbs to 170 lbs. And his pain became so severe and constant that he was given pain medication consisting of a "cocktail" of morphine, cocaine and compazine.

In August, his father died of cancer in New Jersey, and on the drive home from the funeral, Dr Sattilaro did something that usually he would never do--he picked up two hitchhikers. This act saved his life, and indirectly, probably the lives of many others. One of the young hitchhikers went to sleep on the back seat and the other, Sean McLean, talked. As Dr Sattilaro revealed his reasons for the trip, he told his listener that he too was dying of cancer. Sean McLean replied, "You don't have to die, cancer isn't all that hard to cure". This was on August 9, 1978.

Sattilaro said later, "I looked at him and though he was just a silty kid."

About a week later, he received a package in the mail from McLean; it contained a book called *A Macrobiotic Approach to Cancer*. He examined it cursorily and was about to toss it in the waste basket when he noticed a testimonial written by another Philadelphia physician who had successfully treated herself for breast cancer with macrobiotic methods.

On August 24, 1978, in a "last-chance" attempt at survival, he introduced himself to 30-year-old Denny Waxman, director of the Philadelphia East West Foundation, which instructs people in macrobiotic dietary principles. Waxman advised him to adopt this diet but to omit fish, oil, flour products and fruit initially. Dr Sattilaro was disbelieving, but had nowhere else to go and so embarked upon the diet.

In two weeks most of his pain had gone and he discontinued medication except for the estrogen. He experienced a feeling of wellbeing which he could only ascribe to the diet, and yet his lifetime of medical training did not at first allow him to believe in it. He had one relapse of pain when he departed briefly from the diet, but thereafter has stuck strictly to it.

His weight reduced to his normal 145 lbs and he continued to improve. In June 1979 after a consultation with Michio Kushi, the president of the East West Foundation, he took himself off estrogen and he continued to get stronger.

On September 25, 1979, he underwent an exhaustive examination in his own hospital, and the other physicians were stunned at the result. He was completely free of cancer.\*

\*Warning: Dr Kristine Nolfi reported that having completely cleared her breast cancer by rigid dieting, the cancer reappeared after she resumed eating small amounts of cooked food. This has happened with a number of people who have again cleared themselves by resuming the strict diet. On the other hand, others have returned to eating cooked food without trouble. In his book *Breast Cancer: A Nutritional Approach* (1977), Dr. Carlton Fredericks says: "Tissue which has suffered dietary insult will recover, but it remembers the transgressions. It may take five years of the average American diet to cause severe problems. Once corrected by proper diet . . . it may take only two months of poor diet to awaken all the old symptoms. Under the microscope the tissues show no change, but they remember, implacably".

Dr Sattilaro's story is told in his book *Recalled By Life* published in 1983.

## In summary

It is apparent that cancer is the result of multiple factors, mainly self-inflicted, not all of which need be present together and which vary greatly in proportion and degree. The cancer growth itself is a symptom of a serious constitutional disorder upon which cells become cancerous only because they are forced to.

The cancer process may take many years to proceed to the stage where a primary growth commences and up to this point the process is easily reversible. By the time secondary growths appear the process is very advanced. The stages are:

1. Toxemia, at first counteracted by the liver and excretory organs.
2. Chronic toxemia as liver function gradually declines.
3. Pre-cancer, particularly in tissues with poor blood circulation.
4. Irritation or injury to pre-cancerous tissue causing critical cell dedifferentiation resulting in cancer cells. Still no cancer growth if immune system reasonably functional.
5. Further depletion of immune system due to emotional or physical stress.
6. Cancer cells, no longer destroyed by lymphocytes, form growth of tumor of low malignancy.
7. Vicious circle commences as tumor waste products add to toxemia.
8. Further de-differentiation of cancer cells increases degree of malignancy.
9. Malignant cells detach from primary tumor but at first are apprehended in lymph nodes.
10. Malignant cells carried further in lymph and into main bloodstream, but no metastasis occurs while blood flows freely.
11. Metastasis commences when malignant cell lodges in coagulated blood in a blocked vessel. Now free of any remaining constraints to growth which may have partly controlled it at the primary site, the metastasized growth commences virtually unrestrained.

It is obvious (and this has been demonstrated by many autopsies when people have died from causes other than cancer) that many apparently healthy people have cancer of which they are unaware.\* The cancer may lie dormant for years or be held in check by their immune responses. Subjected to shock, worry, grief or injury, such people rapidly develop cancer when their immune responses become depleted.

\*In his book *Antibodies and Immunity* (Nelson, 1968), Dr G. J. Nossal says that in autopsies of non-cancer deaths, 22% reveal the presence of unknown malignancies. Of 1,000 such autopsies where cancer was not involved, when the thyroid was specifically investigated, over 50% contained malignant nodules. Other autopsy studies have shown that unsuspected cancer of the pancreas and thyroid is quite common and that in men who make 75 years prostate cancer is present in 50%.

Present medical statistics of industrial nations indicate that one person in every three must expect to get cancer sooner or later. The correct prediction is worse, because only for the fact that the majority of people perish prematurely of heart or some other degenerative failure, it is almost certain that practically everyone on the Western diet would sooner or later get cancer.

According to the Cancer Society, there are seven danger signals: any sore that does not heal; any lump or thickening; unusual bleeding or discharge; any change in a mole; persistent indigestion or difficulty in swallowing; persistent hoarseness or cough; and any change in bowel habits. You cannot afford to wait for these signals because they are too late; they indicate established cancer, and by this time it is touch and go whether restoration of normal metabolism is possible.

It is obvious that any substance or influence of any kind which in any way or any degree adversely affects the chemistry of the body, can thereby contribute to the development first of pre-cancer and then to cancer.

Cancer in humans and laboratory animals has been separately correlated by many researchers, with each of the following factors:

- Oxygen deprivation to cells.
- Constipation.
- High blood viscosity (sludged blood).

- Lipotemia: high blood fat, cholesterol and various toxins (which may include poisons from infected teeth and from amalgam fillings).
- Defective blood chemistry.
- Restricted circulation (eg. tight clothing).
- Excess body fat.
- High dietary fat.
- High dietary protein (animal or vegetable).
- High meat intake (particularly beef, smoked meat, smoked fish).
- High dietary sugar and other refined carbohydrates.
- High dietary starch intake.
- High dietary sodium (salt and monosodium glutamate).
- High intake of spiced food.
- High intake of canned, preserved, or processed food.
- High intake of caffeine in coffee, tea, chocolate, cola drinks.
- Low intake of fresh fruit and vegetables.
- Cooking of food (particularly at high temperatures).
- Vitamin, mineral and enzyme deficiencies (either missing from diet or destroyed by cooking or processing), especially Vitamins A, C, E, and minerals potassium and selenium.
- Hormonal disturbances, particularly hypothyroidism.
- Oral contraceptives.
- Alcohol.
- Beer drinking as distinct from other alcohol.
- Fluoridated water.
- Chlorinated water.
- Various chemical carcinogens inhaled, eaten, absorbed through skin or administered medically (some hair dyes and suntan lotions are suspect).
- Aluminum cooking utensils, cans, containers.
- Drugs (including medicinal drugs). Sedatives, tranquilizers and painkillers.
- Smoking (includes carbon monoxide, nicotine and carcinogens).
- Air pollution, car exhaust fumes, etc.
- Talcum powder, asbestos (irritants to sensitive tissues).
- Lack of sunshine.
- x-rays and TV set emissions.
- Lack of exercise.
- Poor general health.
- City life.
- Stress--emotional or physical (including overwork, fatigue, nagging etc.).
- Worry, grief, despair.

Whereas it is possible that correction of diet alone can prevent cells becoming cancerous, it has been found that once cancer cells are established they may survive, regardless of diet, if the immune system is not functioning properly. The immune system must therefore be restored to vigorous activity along with the general health of the body.

With all these facts, surely it is ridiculous to undertake any medical treatment whatever before first rectifying as many of the foregoing factors as possible. Nobody in the world can give one sensible reason why not. But remember this: let it be absolutely clear that medical treatment, particularly chemotherapy, is so damaging to the body that the patients' chances of recovery are severely prejudiced. Remember, first and foremost, our objective is to detoxify the body and restore its proper chemical balance so that, revitalized, it can restore itself to health.

If all that sounds reasonable, this is what to do:

1. Adopt a diet of 100% fresh, raw fruit and vegetables, high in Vitamins A and C, preferably unsprayed, excluding any which are difficult to digest. No oils, dressings or condiments.
2. Supplement the diet with digestive enzymes, properly prescribed.
3. Observe all the restrictions of salt, sugar, coffee, tea, alcohol, grain products.

4. Drink only distilled water (little water will be required anyway).
5. Avoid air pollution, smoke of any kind.
6. Avoid all medicines, tranquilizers, sleeping pills, sedatives, painkillers, antibiotics etc.
7. Remove or repair infected teeth.
8. Avoid TV set radiation.
9. Get adequate exposure to sunshine without wearing glasses and preferably without clothes. Do not overexpose.
10. Adopt a light aerobic exercise program but don't overstrain.
11. Get plenty of rest.
12. Somehow--anyhow--escape from pressure and worry. Seek peace and tranquility.
13. Understand the problem and tackle it purposefully and confidently.
14. Friends and relations should participate and add moral support.

As mentioned earlier, further assistance to the body such as supplementary enzymes, thyroid extract, vitamins, minerals, herbal extracts, hyperthermia, artificial blood-purification and artificial blood-oxygenation can be provided, under proper supervision, to patients with advanced cancer whose vital organs cannot regenerate without help. An important feature of the Gerson treatment is the use of frequent coffee enemas, the purpose of which is to stimulate the flow of bile in order to remove toxins formed by the disintegration of cancer tissue. Dr Gerson found this procedure necessary after losing some patients who suffered internal poisoning.

The recommended program is quite simple, is painless, and gets results. However, the additional therapeutic procedures just mentioned should be carried out with the advice and supervision of a professional consultant.

Subsequent to the discovery of his colon cancer, president Ronald Reagan, at the instigation of his wife Nancy, adopted what is known as a "prudent" diet. And after major surgery to remove the malignant tumor, his recovery was so rapid as to astonish his doctors. Said the leading surgeon, "The President is on a post-operative course that surpasses by 99.9% all patients who undergo this type of surgery. That includes all patients, much less one who is 74 years old". Two reasons for this were given: the President's "superior physical shape" and "the amazing fact that his internal workings were those of a 40-year-old".

From the reports the author has read, the President's present diet still contains food unsuitable for a cancer patient and I would feel more confident for him if he went 100% Gerson.

The significance of these events is great, and perhaps soon the "quacks" who long ago pioneered the dietary therapy for disease will be accorded the recognition they deserve.

## **In conclusion**

When it is considered that cancer remissions are often achieved by correcting just one factor out of so many involved, it is likely that correction of them all should ensure success in the majority of cases.

At a meeting of Nobel Laureates at Lindau, Germany, June 30, 1966, Dr Otto Warburg, the winner of two Nobel prizes for discoveries of key processes of cell respiration and various enzyme systems, concluded his address saying:

"Nobody today can say that one does not know what cancer and its prime cause be. On the contrary, there is no disease whose prime cause is better known, so that today ignorance is no longer an excuse that one cannot do more about prevention. The prevention of cancer will come there is no doubt, for man wishes to survive. But how long prevention will be avoided depends on how long the prophets of agnosticism will succeed in inhibiting the application of scientific knowledge in the cancer field. In the meantime, millions of people must die of cancer unnecessarily."

## **Recommended reading**



*A Cancer Therapy, The Results of Fifty Cases* (1975)--Dr Max Gerson

*The Prime Cause and Prevention of Cancer* (1969)--Dr Otto Warburg

*The Survival Factor in Neoplastic and Viral Disease* (1961)--Dr William F. Koch

*A Solution to the Cancer Problem* (1962)--Dr Cornelius Moerman

*Cancer and Cure--A Doctors Story* (1976)--Dr Eva Hill

*Recalled by Life* (1983)--Dr Anthony Sattilaro

*The Anatomy, Physiology, Pathology and Treatment of Cancer* (1844)--Dr Walter Walshe

*Cancer: Its Nature and Successful and Comparatively Painless Treatment* (1866)--Dr John Patterson

*The Treatment of Cancer Without Operation* (1903)--Dr Robert Bell

*The Cancer Scourge and How to Destroy It* --Dr Robert Bell

*Reminiscences of an Old Physician* (1924)--Dr Robert Bell

*Cancer* (1912)--Dr Forbes Ross

*Cancer, Its Genesis and Treatment* (1912)--Dr Forbes Ross

*Cancer, Its Non-Surgical Treatment* (1921)--Dr Lucius Bulkley

*The Prevention of the Diseases Peculiar to Civilization* (1929)--Sir Arbuthnot Lane

*Be Your Own Doctor* --Dr Anne Wigmore

*The Body is the Hero* (1977)--Dr Ronald J. Glasser

*The Greatest Battle* (1978)--Dr Ronald J. Glasser

*Has Max Gerson a True Cancer Cure?* (1962)--S. J. Haught (Retitled *Cancer--Think Curable!*)

*Victory over Cancer* (1957)--Cyril Scott

*My Experiences with Living Food* (1954)--Dr Kristine Nolfie

*Cancer, Its Dietetic Cause and Cure* (1963)--Dr Maude Tresillian Fere

*Does Diet Cure Cancer?* (1971)--Dr Maude Tresillian Fere

*Cancer is Curable* --Stefanos Stefanou

*How I Healed My Cancer Holistically* (1978)--Dore Deverell

*Civilized Diseases and Their Circumventions* (1978)--Max Ganten

*Fresh Hope in Cancer* (1978)--Dr Maurice Finkel

*Fresh Hope With New Cancer Treatments* (1984) -Dr Maurice Finkel

*Living Above It* (1974)--Robert East

*How I Conquered Cancer Naturally* (1975)--Eydie Mae Hinsberger

*Cancer and Vitamin C* (1979)--Drs Evan Cameron, Linus Pauling

*You Can Fight For Your Life* (1977)--Dr Lawrence Le Shan

*The Death of Cancer* (1978)--Dr Harold Manner

*The Psychogenic Biochemical Aspects of Cancer* (1979)--Harold E. Simmons

*Cancer, How and Why It May Be Wiped Out* (1977) Gordon Roberts

*Fruit Can Heal You* (1908)--Dr O. L. Abramowski

*How I Overcame Inoperable Cancer* (1975)--Dr Ebba Waerland

*Healed of Cancer* (1977)--Jo Lawson

*Killing Cancer* (1980)--Jason Winters

*Too Young to Die* (1979)--Rick Hill

*You Don't Have to Die* (1956)--Dr Harry S. Hoxsey

*Laetrile Case Histories* (1977)--Dr John A. Richardson

*Food Is Your Best Medicine* (1965)--Dr Henry G. Bieler

*One Answer to Cancer* (1969)--Dr William Kelly

*An End to Cancer?* (1978)--Leon Chaitow

*Cancer, A Healing Crisis* (1980) -Jack Tropp

*The Grape Cure* (1948)--Dr Johanna Brandt

*Cancer, How to Prevent It and How to Fight It* (1978)--Dr E. Berkley

*Cancer Winner* (1977)--Jaquie Davison

*Healing Miracles from Macrobiotics* (1979)--Dr Jean Charles Kohler

*Stress, Cancer and the Mind* --Dr Hans Selye

*The Lonely Sea and Sky* --Francis Chicester

*The Cancer Blackout* (1959)--Maurice Natenberg

*Coronary? Cancer? God's Answer* (1979)--Dr Richard O'Brennan

*Cancer: The Facts* (1979)--Sir Ronald Bodley Scott

*How to Prevent and Gain Remission From Cancer* (1975)--John H. Tobe

*Cancer Treatment, Why So Many Failures?* (1980)--Richard Ericson

*Fruit, The Food and Medicine for Man* (1961)--Morris Krok

*A Rational Concept of Cancer* (1977)--Robert W. Stickle

*Cancer Holiday* (1978)--Bettie Towner

*A Time to Heal* (1971)--Peter Newton Fenbow

*Cancer--A Second Opinion* (1975)--Dr Joseph Issels

*Cancer--A Disease of Civilization* --Vilhjalmur Stephannson

*To Age--But Without Cancer* --Dr R. Stoeger

*Diet, Nutrition and Cancer* (1982)--National Research Council

*Colon Health* (1979)--Dr Norman Walker

*How to Prolong Life* ( 1880)--Dr Charles de Lacey Evans

*The Wheel of Health* (1938)--Dr G. T. Wrench

*Hypothyroidism, The Unsuspected Illness* (1976)--Broda O. Barnes

*The Liver and Cancer, A New Cancer Theory* (1955)--Dr Kasper Blond

*Now That You Have Cancer* (1977)--Dr Bruce Halstead

*Get Well Naturally* (1965)--Linda Clark

*Cancer Causes and Natural Controls* (1983)--Dr Lynn Dallin

*Nutrition, the Cancer Answer* (1983)--Maureen Salaman

*The Topic of Cancer* (1982)--Dr Brian Richards

*Fluoride, The Aging Factor* (1983)--Dr John Yiamouyiannis

*A Cancer Patient's Survival Manual* (1983)--Barbara Huntington

*The Fitzgerald Report* (1954)--Benedict F. Fitzgerald

*Save Your Life* (1983)--Michael L. Culbert

*A Gentle Way with Cancer* (1983)--Ian Pearce, BA, BM, BCh, MRCS, LRCP

*The Cradle of the World and Cancer--A Disease of Civilization* (1927)--Dr E. H. Tipper

*A Holistic Approach to Cancer* (1983)--Ian Pearce, BA, BM, BCh, MRCS, LRCP

*The Anti-Cancer, Anti-Heart Attack Cookbook* (1985)--Ross Horne and Toni Bobbin

*The Cancer Prevention Diet* (1983)--Michio Kushi

*The Macrobiotic Approach to Cancer* (1982)--Michio Kushi

## CHAPTER TWENTY ONE

# OTHER DEGENERATIVE DISEASES

*I'm feeling crook, can't see real good,  
got pains and constipation,  
Can't hear real well, what's that you say,  
it's common in our nation?  
What I think I'd better do is find out  
all about it,  
I could do better on my own because,  
this medicine--I doubt it.*

Lipotoxemia, the condition which leads to heart disease and cancer, is responsible also for the other so-called diseases of degeneration. There are many of these, each one designated a scientific name and each one requiring specific diagnosis before medical treatment is prescribed.

If, as I have demonstrated with heart disease and cancer and can demonstrate with all the rest, all of these conditions have the same underlying cause, why is painstaking diagnosis of each condition so important? The answer is that diagnosis is really not important at all, because, apart from temporary heroic measures which may occasionally be required to avert imminent death, the method of treatment required is the same in all cases, namely the elimination of toxemia.

Louis Kuhne of Germany, one hundred years ago, explained this simple concept in his book *The New Science of Healing*. Summarizing, he concluded: "From the foregoing exposition we must draw the momentous conclusion: There is only one cause of disease and there is only one disease, which shows itself under different forms".

The question might be asked, why don't all degenerated people display the same disease conditions? Generally speaking they do--lowered resistance to infection, a touch of arthritis, the need for reading glasses, increased blood pressure and so on--the "trivial" complaints which are the forerunners of heart disease, stroke, diabetes, kidney failure, liver failure and cancer.

Thus the many so-called diseases are in fact symptoms of the one underlying constitutional condition of lipotoxemia, manifested in varying ways and degrees according to variable dietary and other lifestyle factors.

Not the least of these factors is stress, which is capable of triggering or exacerbating the entire "Pandora's box" of disease symptoms. The emotional condition is so powerful a factor in disease it has often been assumed to be in some cases the only cause of an illness such as tuberculosis or cancer. People were described as having a "tuberculosis personality" or a "cancer personality" and their complaints regarded to be to a great extent psychosomatic. This of course, is not the case, and in all illness it should be borne in mind the importance not only of diet and stress, but also rest, sunshine and exercise. It is more likely that a depressed personality is a symptom of body degeneration in the first place, and will change

for the better when health is restored.

## Multiple Sclerosis

MS is a disease of the nervous system where the protective sheaths of nerve fibers suffer local damage, resulting in a wide variety of physical symptoms. Muscle co-ordination is affected throughout the body and can show up as temporary blindness, double vision, speech impediment, loss of balance, unco-ordinated movement of hands or limbs and so on. Symptoms may commence in youth or later and become progressively worse.

The initial signs may be only such things as tingling sensations, aches, fatigue, dizziness or headaches. Note that these are symptoms of high blood viscosity and impaired oxygen transport associated with high blood fat levels.

The myelin nerve sheaths suffer damage in locations where circulation is sparsest, which is where the tiny venules of the white matter of the brain and spinal cord receive the blood flow from the capillaries on its way back to the heart. Where damage occurs, tiny plaques grow, and around these plaques are found lymphocytes from the blood. Some researchers are of the opinion that the lymphocytes have caused the damage, thus making MS an auto-immune disease. On the other hand, it is more likely that the damage is caused by lack of oxygen to the cells and that the lymphocytes have proceeded there as a consequence. Lymphocytes do not normally leave the bloodstream of the brain and nervous system to patrol among the tissue cells as they do elsewhere in the body., but apparently can do so if called upon. Should the lymphocytes at MS locations themselves perish for lack of oxygen, it is possible that damage to the nerve sheaths is caused by their liberated digestive juices in a manner similar to the joint damage of arthritis.

The same geographic distribution around the world as applies to heart disease, cancer and other degenerative diseases prevails again with MS. It is a disease of civilization. In short, people relatively free of stress, living on primitive unrefined diets, are free of MS, and populations whose lifestyles incorporate stress and the Western diet show an incidence of MS proportional to their intake of fat and refined carbohydrate and their exposure to stress.

There is a low incidence of MS in the tropics which has nothing to do with the temperature except perhaps that life in the tropics is reasonably placid. Not one case has been observed among six million Bantus in South Africa but it appears there among the whites along with cancer and heart disease.

Although MS occurs in all Westernized countries with the highest incidence in the cities (as with cancer), the highest incidence in the world is in the Orkney and Shetland Islands of Northern Scotland. In this area of Scotland the incidence of MS is three times greater than that of the rest of the UK and three times that of New York City, which areas have the next highest rates in the world. It is significant that the per capita intake of fat in Northern Scotland is 19% greater than that of the UK generally, just as their colon cancer rate is 19% higher. It is also significant that Scotland has a very high rate of alcoholism.

Dr R. L. Swank, the eminent specialist whose studies of blood fats have been immeasurably valuable to heart disease research, in 1950 correlated the incidence of MS with fat in the diet. This was reported at the time in the *American Journal of Medical Sciences*.

Blood fats are elevated not only by dietary fat but by the intake of refined carbohydrate (predominantly sugar and alcohol) which forms a substantial proportion of the Western diet. Another big factor causing elevation of blood fats is stress, and stress is strongly implicated with MS just as it is with cancer.

Not only do we know that stress increases blood fat and cholesterol levels, but also it causes debilitation of the thymus gland and the operation of the body's immune system. Medical tests show that MS patients display abnormal immune reactions with high levels of certain antibodies and at the same time, low levels of lymphocytes which are debilitated in function.

Fifty years ago the death rate among MS sufferers was extremely high, 30% of patients dying in 2-4

years, with only 8% lasting twenty years or more. They almost invariably died of "complications"--1927, 58% of MS deaths were from pneumonia, 36% from sepsis due to bed sores and urinary infections and many from tuberculosis.

Thus it is obvious that impairment of the immune system is a dangerous feature of MS as it is with other forms of disease, but since 1927 the mortality from infection has greatly diminished due no doubt to the generous use of antibiotics.

Further indicative of MS being a metabolic disease of degeneration is the frequent concurrence of other chronic disorders such as thrombosis, cardiovascular disease, cerebrovascular disease, transient ischemic hypertension, emphysema, kidney stones, kidney failure, polyarthritis, spondylosis, arthrosis, nerve root syndromes, osteoporosis, diabetes mellitus, neuropathies, gynecological disorders, prostate gland hypertrophy, glaucoma and neoplasias, which occur in MS patients with about the same frequency as in the general population.

It has been observed that any form of stress, either emotional or physical, will increase the degree of MS symptoms. And by the same token, the placebo effect of encouragement and hope, according to one specialist, works to relieve symptoms in MS patients more frequently than in any other patients.

In age distribution MS occurs most commonly between 18 and 45, usually among people in the middle to upper income class. Both of these facts point directly to stress because it is within the middle to upper income group where the pressure and responsibility start at age 18 and peter out after about 45.

The incidence of MS among women is twice that of men, and it is significant that the onset of stress-related rheumatoid arthritis has also a far higher incidence among women of high intelligence. Such women, deprived of equal opportunity by society, suffer frustration and stress.

As mentioned, in area distribution MS incidence is higher in cities and so is the incidence of cancer and heart attacks. Once again the finger points to stress.

However, it is evident that the high intake of dietary fat and cholesterol predominates as the major MS factor in most cases because the MS incidence in North Scotland relates directly to high dietary fat and apparently not so much to environmental stress. Another significant thing is that the incidence of alcoholism in Scotland is very high. The rate of hospital admissions for this disease is seven times higher for men and five times higher from women than in the rest of the United Kingdom. The point here is that it is well known that alcohol has the same effect on the body as stress, causing nervous and hormonal disturbances and elevating blood fats, at the same time immobilizing certain oxygen-processing enzymes. Perhaps some general form of stress affects the Scots as a race, and causes them to drink excessively.

What could be considered as a possible factor in MS is the role played by natural body cholesterol. Cholesterol is an essential component in the brain and nervous system and it is in these organs of the body that the highest levels of cholesterol are naturally found. This cholesterol, manufactured by the body, is distinct from cholesterol eaten as part of the diet. It is significant that when stress is imposed on a person there is an instant increase in the body's production of cholesterol, and blood cholesterol increases significantly. It is possible that inhibition of the function of this natural cholesterol in the presence of high blood fat levels may in some way influence the onset of MS.

## **Corrective measures**

Be that as it may, the corrective measures for MS are precisely those described for cancer, arthritis, etc.

It should be noted that although many cancer remissions have been achieved in days or weeks, MS may not be so easy--because of damage to the nerve sheaths. It has been believed in the past that nerve fibers do not regenerate, but as recoveries have been made from MS then positive thinking accepts that possibly they can.

For years, researchers have noted the correlation of MS to dietary fat but have been thrown off the track,

as were the heart disease researcher, by misunderstanding and confusion about polyunsaturated fats. Many diets were tried and found ineffectual, including diets in which polyunsaturated fat was substituted for saturated fat.

Two recoveries achieved by dietary means have been described by *Prevention* magazine (March 1975 and July 1977). Once again there was confusion about fats but errors made in this regard were not severe enough to prevent good results.

The recoveries were that of English playwright Robert MacDougall from complete paralysis and blindness, and of Leslie Clarke, also of England, with lesser symptoms. MacDougall designed the diet used in both cases and it is referred to as the "gluten-free" diet because he thought that gluten was the dietary culprit responsible for MS. His theory was that gluten, in combination with dairy products and refined sugar, was the root cause of all degenerative diseases. Gluten is contained in wheat, barley and oats and these foods he eliminated from the diet. But he also eliminated animal fats and refined sugar.

Potatoes and unpolished rice were used liberally. Although Macdougall's diet wrongly included vegetable oil, Leslie Clarke's weight reduced from 180 lbs to 147 lbs which indicates that he rectified some mighty big mistakes in other dietary areas.

W. Ritchie Russell, formerly Professor of Clinical Neurology, Oxford, specialized in the treatment of MS for many years. He retired in 1970 but has since followed up the progress of many MS patients whose case histories dated back to 1960. The information which follows is from his book *Multiple Sclerosis, Control of the Disease* (Pergamon Press, 1976).

At no time does Professor Russell mention blood fats, and in his brief reference to diet he excludes it as an MS factor. However he may err in that regard, every single statement he makes is entirely supportive of what I have already said, even though he is unaware of their direct connection to blood fats. Notwithstanding, Professor Russell achieved practically total success with all those patients who permanently followed his recommendations. Success in treating MS means--

1. In the case of early MS, the complete and permanent elimination of the disease.
2. In the case of advanced MS, the total arrest of the MS process, in most cases with great improvement in function. More than this is not possible, of course, if nerve tissue is in places permanently destroyed.

Professor Russell did not treat his patients. He realized that MS was related to the lifestyle factors of stress, overwork and fatigue and to a low level of physical fitness, and that the only remedial action was for the patients themselves to correct these factors.

He observed that MS is a problem primarily concerning the circulation and that it was significant that MS is common in countries with a high incidence of coronary heart disease. He also observed that migraine was common among MS patients. To quote from his book:

"All students will agree that serious relapses in MS are often associated with periods of physical and emotional strain and also apparently with inoculations, illnesses and injuries. MS occurs more frequently among the upper social classes in whom the special demands, the weight of responsibility and authority, as well as the so-called rat-race type of living may lead to stress and fatigue.

"In our experience, athletes in full training are virtually protected, and athletes who have abandoned training owing to pressures of business etc, may become vulnerable.

"The laborer or bricklayer or factory heavy assembly- line worker who is working about forty hours per week seldom, if ever, contracts MS."

In the early 1960s Professor Russell was working at Stoke Mandeville Hospital, and noted that the exercise program devised for MS patients with spinal injuries, favorably affected their general MS symptoms. So a rest-exercise program (REP) was instituted for all MS patients and this was immediately successful.

The exercise consisted of "short periods of quite violent exercise designed to accelerate the heartbeat and make the subject short of breath, These are built up gradually to develop an athletic type circulation which is subject to strain at least once a day".

Rest, lying down, was to be taken not less than once every six hours, and fatigue was to be avoided.

As you might guess, most of the patients, as soon as they felt cured, gave up the program and of course most of them eventually suffered relapses, whereupon they would again resume the REP. This is understandable, but Dr Russell warns that eventually damage may be sustained which will be permanent. Not one of the patients who persisted with the REP over a period of 15 years, ever had a relapse.

It is a pity that Dr Russell was unaware of the connection of stress and exercise with levels of fat in the blood. Had he realized the implication of fat with MS, he would have further realized the importance of diet, the most important factor of all.

## **Hyperbaric therapy**

That MS is an oxygen deficiency disease caused by lipotoxemia, high blood viscosity and low blood oxygen there can be no doubt because MS patients respond instantly to improved blood oxygen content as achieved by hyperbaric therapy (see Chapter 5). Drs R. M. Parker and J. T. Taylor of Amarillo, Texas, in a paper titled, "Hyperbaric Oxygen Therapy for Multiple Sclerosis" (*Journal of Orthomolecular Psychiatry*, Vol 9, No 4, 1980) describe the treatment of 20 patients of which 15 achieved excellent results and five slight, which were sustained indefinitely except for a few who required repeat therapy. Treatment included a modified diet which excluded cereals, dairy products and caffeine, low in fat and emphasizing raw fruit and vegetables.

Similar success is reported by Dr Philip James of Dundee University, UK, a specialist in diving medicine who recognized the similarity between MS patients and divers with the "bends". Dr James believes that MS is caused by fat globules trapped in small blood vessels of the brain, cutting off the blood supply. He used a diver's pressure chamber for the treatment. No mention in the report was made about diet.

## **Author's comments**

Hyperbaric therapy is obviously unnecessary for MS patients because their blood can be better oxygenated by dietary means.

We have established in the previous chapters that the three main lifestyle factors responsible for degenerative/metabolic diseases are: bad diet, stress and lack of exercise, by virtue of the resultant high levels of blood fats, together with debilitation of the body's immune system. Professor Russell's REP, properly followed, effectively corrected two of the factors. Reducing stress alone drastically lowers blood fats and allows the immune system to pick up, and we know that aerobic exercise enhances the metabolism of blood fats as well as alleviating the effects of stress.

Considering that diet is the primary factor involved in lipotoxemia, it becomes clear that if that factor, too, is corrected, then MS (like cancer, heart disease and so on) just cannot eventuate.\*

\*The MS Society in Sydney recommends a high protein diet, "to provide energy", *A Manual an MS*, which they use as a reference, recommends a diet composed of (total calories) 50% carbohydrate, 30% fat, and 20% protein with cholesterol limited to 300 mg a day and no restriction on fruit. This is bad advice, and if the MS society achieves any improvement with it, think how well patients would respond with the correct diet.

Unfortunately, if Professor Russell's contention that badly scarred nerve tissue remains permanently impaired, then full recovery from advanced MS may be impossible.



In the light of what is now known, it would be strongly advisable for MS sufferers to adopt a strict low-fat vegetarian diet and the rest of the procedures recommended for cancer patients in the preceding chapter.

The author has observed a number of "dramatic" recoveries from MS achieved by correcting diet, one of which is described in Chapter 2. Another good example is the reversal of MS in three children of one family. On the Western diet and with great stress due to a violent alcoholic father, all three children displayed MS symptoms ranging from incapacitation in a wheelchair with the 16-year-old daughter, stumbling and loss of co-ordination with the second daughter and slight symptoms in the son who was the youngest. The eldest girl was not expected to live another year. The family moved to the country, the father changed his ways, and the family adopted the Pritikin diet in September 1980. The two youngest children were free of symptoms in two weeks and the eldest, instead of dying, has recovered to the extent of walking without assistance and riding a bicycle. This story was publicized in 1981 by the *Sydney Daily Mirror* under the heading of "PRITIKIN'S MIRACLES".

Rejected by the doctor at the MS Society in Sydney, the author approached the Society President, Sir John Maddern, proposing changes in treatment for MS patients. Sir John's reply was very encouraging and in his letter he requested a meeting for when he returned home from having some medical treatment for a problem of his own.

Not long after that I was returning from the USA, and out of Honolulu started reading the latest Sydney newspapers put aboard there. There was the headline "Sir John Maddern Dead". He had died of heart disease, and with him had died any chance for MS patients for who knows how long.

## Depression

"Health, Wealth and Happiness" is a universal toast to those we wish well. It is commonly known however, that wealth in the form of money cannot buy happiness, and that rich people are often miserable. Real wealth begins with high self-esteem and the love and respect of others, and money, although perhaps desirable, is not a major factor.

Many people ask the question "What is the purpose of Life?" It is a question that no one can answer to everyone's satisfaction. Religion provides an answer to many because life's imperfections and strife can be accepted as a temporary inconvenience on the way to eternal happiness. To others driven by curiosity and ambition, hard work keeps them so busy that they never stop to think about it. Indeed, few people stop to think about it and face each day as it comes.

The only reason for living really is to be happy, and even if a person is in the midst of calamity, just a glimmer of hope for eventual happiness is sufficient to keep them going.

The people who often do evaluate the purpose of their lives are those who are depressed, and some of these who can see no hope terminate their lives by suicide. Many such people have their lives terminated by some disease to which they easily succumb. It is Nature's way of protecting them from distress and "purposelessness"

Depression, therefore, is a state of disease which causes physical debilitation, leading inevitably to body degeneration and proneness to all manner of infection. As has been discussed in the chapter on stress and elsewhere, constant depression produces premature aging at best, and at worst, death by cancer.

There are possibly thousands of reasons for depression and reading this book will do little to remove most of them, but I would like to make a singular observation. The happiest people in the world, regardless of their background, are those in love, and the unhappiest are those with a broken love affair or marriage. The worst form of depression, or emotional distress, as we have seen, derives from the death of a spouse, then followed by divorce and marital separation.

In the discussion on hypoglycemia which follows shortly it is shown that this disease is accountable for

a very high proportion of marriage breakups. This is easily understandable. Is an active, trim, attractive woman supposed to live indefinitely with a fat, lazy and impotent husband? Or is an active virile man supposed to remain forever faithful to a perpetually "indisposed" and overweight wife? So the point of this entire discussion now becomes evident--the condition of happiness relies on a myriad of factors, many of which are beyond our control. However, the prime essential factor--vigorous health--is very much subject to our control, and before lamenting and reaching for more valium, it might be a good idea to go to the kitchen, throw out all the junk, and walk vigorously down to see your greengrocer.

## Diabetes

Diabetes is the number three cause of death and number one cause of blindness in the USA and is estimated to cost the nation over 20 billion dollars a year (1982). Once thought to be hereditary, diabetes is now clearly established to be caused by faulty diet and exacerbated by stress.

It is a metabolic disease characterized by the body's inability to metabolize the normally produced blood sugar (glucose). The blood sugar level rises as a result. It is caused in most cases by high blood fat levels which inhibit the interaction of the glucose with the hormone insulin produced by the pancreas. As people get older and gradually degenerate, their capability to metabolize fat reduces, which explains why diabetes most often appears in adults, in which case it is called adult-onset diabetes.

As already explained, the main cause of high blood fat levels is a diet high in fat. Excess protein in the diet, and refined carbohydrate worsen the condition. Another strong factor in elevating blood fats is stress, and when a borderline condition exists, stress will exacerbate the diabetic condition.

The body's metabolism of glucose is controlled by insulin which is released in the required amounts from the gland called the pancreas. As well as taking part in the processing of the glucose, the insulin limits the liver's release of glucose into the bloodstream once the desired level has been reached. The insulin also controls the release of fatty acids and glycerol from body tissue storage. In short, insulin is necessary for the metabolism of glucose and at the same time maintains the correct level of fuel supplies in the bloodstream.

For many years it has been accepted that diabetes results from inadequate insulin production due to a defective pancreas. This was "proven" when it was demonstrated that when animals had their pancreas removed they became diabetic, but the condition could be reversed by the injection of insulin. When it was further demonstrated that regular, carefully measured doses of insulin enabled the body to metabolize the desired amount of blood sugar, the sugar level was said to be "controlled", and this became the standard treatment for diabetics. The insulin was first obtained from the pancreas of animals but was later synthesized. While this treatment is effective in allowing the patient a reasonably normal life, diabetics still suffer from a wide range of circulatory complications.

In the 1960s it was discovered (again)\* that most diabetics actually have more natural insulin in their blood than non-diabetics, in fact, in some cases, two or three times as much, showing that the pancreas was doing its job well and was not defective at all. It was also discovered that the effectiveness of insulin decreased as the level of blood fats increased.

\*Medical tests a hundred years ago in USA and Europe showed that most diabetics possessed a perfectly normal pancreas and that in most cases, diabetes could be eliminated by a low fat, vegetarian diet. However, the direct implication of fat was not explained until 1923, although it was clear that meat exacerbated the disease.

As it was well known that diabetics always displayed high blood fat levels, the real cause of diabetes became clear. It is caused by the effect of blood fats inhibiting the normal reaction between the blood sugar and insulin, but can be overcome by the addition of sufficient extra insulin injected into the patient.

In other words, the patient's blood sugar production is normal, and the insulin production is normal all the time, but prevented from reacting together by the high levels of fat. No wonder diabetes and heart disease frequently occur together!

It is also understandable that, in the USA, 95% of amputations because of gangrene are performed on diabetic people. Diabetics suffer 75% of all strokes, and make up the majority of the blind, diabetic retinopathy being caused by blood platelet aggregation due to high blood fats.

Diabetes is unknown in populations whose diet is low in fats, protein and sugar. Remember the distinction between refined carbohydrates, which are harmful, and natural carbohydrates, which are definitely required. Experiments have shown that a normal person can, however, ingest high levels of dietary sugar \* and still show a normal glucose tolerance test. The same person after a short time on a high fat diet will, when given a glucose tolerance test, show positive diabetic symptoms. J. P. Felber induced diabetic symptoms in five normal young men simply by giving them lipid infusion which raised their fatty acid level 40% above normal. In two hours the glucose tolerance test was diabetic. (*Me. Exp.* 10:1536, 1964 [Basal]). This effect can be reversed by artificially chemically lowering free fatty acids.

\*For further information on sugar vs diabetes see *Hypoglycemia*.

H. S. Sweeney studied diet effects on groups of medical students:

First group--very high protein diet.

Second group--very high fat diet.

Third group--no food.

Fourth group--very high carbohydrate diet.

In two days the first group tested borderline diabetic. Both the high fat and fasting groups were quite diabetic with post glucose values exceeding 170 mg% (should drop back to 115 or less). The fourth group tested normal. (*Arch. Inst. Med.* 40:818-30, 1927).

Other more prolonged tests in the 1920s-30s and 1950s-60s, showed that diabetes is reversed on low fat, high carbohydrate diets. Somehow or other these achievements were ignored by the rest of the medical profession including the main US diabetic clinic in Boston. The "standard" diet for diabetics, to this very day, excludes sugar but permits fat, the main culprit!

It is known that cereals, particularly wheat products, can exacerbate diabetes and arthritis. It is significant that, second only to eggs, (33%), wheat excites the greatest response (30%) in all tests for food allergies. As an allergy response indicates stress on the body, it may be in this way that diabetes is exacerbated.

**Juvenile diabetes:** In juvenile diabetes the production of insulin by the pancreas is inadequate due in most cases to damage caused by improper diet, and the patient may become insulin dependent for life if the diet is not quickly rectified. Scientists in Denmark have reported a dramatic fall in the incidence of diabetes in children since breast-feeding has come back into vogue. If a person is insulin dependent, the dependency can be greatly lessened by a low fat, vegetarian diet.

In his book *The Healing Factor*, Irwin Stone quotes eight medical research papers produced in the 1940s by Dr S. Banerjee of India, describing the importance of Vitamin C in carbohydrate metabolism. In many tests Dr Banerjee noted that in scorbutic guinea pigs the insulin content of the pancreas was reduced to one-eighth of normal.

It is suspected that pancreatic damage may sometimes be caused by viruses. It was reported by Dr D. Gamble, West Park Hospital, Epsom, England, that frequently within six months prior to the onset of juvenile diabetes, patients had suffered mumps. Similarly suspect were chicken pox and asthma.

The term "juvenile diabetes" is a misnomer because the condition may arise at any stage in life.

**Danger of oral drugs:** In a test conducted in the 1960s, 20,000 diabetics, all on the American Diabetic Association diet (low carbohydrate, high fat!) were divided into three groups, one group given placebo (containing nothing at all), one group insulin, and one group oral drugs. The result, released in 1970, showed that the placebo group, even though their glucose was out of the desired range, had no, more than the usual rate of coronary deaths. The insulin group, their glucose kept within range, fared the same. But

the group on oral drugs, even though their glucose had been kept within limits, had 2.5 times the death rate from heart disease. A British study showed a 2 to 1 ratio. Nevertheless, it was revealed that in New Jersey in 1980, 90% of physicians still prescribed oral drugs!

Referring to the Pritikin Longevity Center's diet and exercise program, Dr James Anderson of the University of Kentucky Medical Center said, "with this kind of approach, diet only, 80% of the diabetics in this country could be normal in 30 to 90 days".

In a report made public before the American Chemical Society, Dr Michael Somogyi of the Jewish Hospital of St Lexies, pointed out that a study of 4,000 diabetic cases conducted by him and his associates over a period of 14 years, revealed that virtually all adult victims of diabetes can be restored to normal health without insulin injections, and that even the less than one per cent of the adult diabetics who still require insulin can get along on 20 units a day or less, instead of 50-150 units.

## **Hypoglycemia**

Hypoglycemia means a state of low blood sugar. A vigorously fit, well-nourished person never experiences this condition as the liver constantly provides blood sugar as required to maintain proper levels.

With low blood sugar, people feel tired, lethargic and depressed. That's what a hangover is. A severe condition of hypoglycemia leads to a variety of neurological and psychiatric disorders such as giddiness, slurred speech, blurred vision, confusion, bizarre behavior, coma and apparent epilepsy.

Low blood sugar may result from long periods without food, and the hunger pangs which occur are a genuine distress signal to eat some food. In modern society, however, hypoglycemia is usually caused not by the absence of food but by excesses of it.

The condition is very prevalent and is caused mainly by the intake of refined carbohydrates such as processed and sweetened breakfast cereals, sugar --white, brown or raw--sweets, chocolate, health food sugar substitutes, soft drinks, alcohol etc. These are composed of simple molecule carbohydrate and as such are not digested in the normal way. They enter the bloodstream too rapidly and upset the sugar balance. The body's control system goes into action and the pancreas pumps out insulin to reduce the sugar by converting it to fat. However, because this is an unnatural condition, the pancreas over-responds, excess insulin is released, and this results in too low a blood sugar level which is hypoglycemia. A sugary pep drink or an "energy bar" will quickly lift the blood sugar again and the person is refreshed--but only briefly until the confused body repeats the process.

In addition to the foodstuffs already mentioned, other unsuspected foods have been found also to rapidly raise blood sugar levels. Dr David Jenkins, of the University of Toronto, in 1983 rated various foods on a "glycemic scale" of zero to 100, with glucose, the most rapidly absorbed raiser of blood sugar being rated at 100. Surprisingly, cooked carrots rated 92, wholewheat bread 72, and pasta 50, compared to honey 87, table sugar 59, orange juice 46 and ice cream 36. Thus once again the cooking process stands condemned. Interestingly enough, in a paper entitled "Health Research" (July 1936) Dr Edward Howell of Chicago (see *Enzymes*) described the rapid increase in blood sugar after eating wholewheat bread and in another paper, "More About Food Enzymes" (1941) said: "Many sufferers from diabetes sacrifice the admirable nutritional qualities of fresh fruit juices because of an exaggerated fear of the sugar content. They mistakenly place fruit sugar in the same low category as ordinary table sugar. The fact of the matter is that the sugars in fresh fruit juices are tolerated by the diabetic organism far better than cooked starches or sucrose. Research findings of medical authorities indicate that raw potato starch does not elevate the blood sugar appreciably, while the same starch, cooked, increases the blood sugar level markedly. Diabetics may take comfort in these facts and expect an improvement in health".

Hypoglycemia has also been linked with fluoridated water, inasmuch as fluoride has the effect of blocking aconitase which is a key enzyme in the metabolism of sugar for energy. Thus, as with diabetes, the symptoms of hypoglycemia may exist in the presence of high blood sugar levels simply because the

body cannot utilize the sugar. Hypoglycemia can also be caused by excess insulin levels resulting from eating excess protein. Excess insulin levels in the blood is called hyperinsulinemia. Quoting from the Longevity Research paper on the subject:

"Rabinowitz tested eight normal women using three different meals. The high protein meal consisting of 27% protein, 31% fat and 42% carbohydrate produced a peak insulin level 200% higher than a 100 gm glucose drink. Such a meal is not unlike the high protein recommendations for hypoglycemic diets. Grasso confirmed Rabinowitz' results in tests using glucose and amino acids with premature infants, obtaining peak insulin levels 400% higher on a 50% amino acid--50% glucose infusion than on glucose alone.

"Hyperinsulinemia can readily bring glucose levels down to hypoglycemic levels, but even more catastrophic, in Stout's animal tests, elevated levels of insulin have stimulated cholesterol synthesis in the arterial wall, and have resulted in the formation of atherosclerotic plaques" '

Similar findings on the relationship of high insulin levels to hypoglycemia have recently been published by Drs J. Best, D. Chisholm and F. Alford of St Vincent's Hospital, Melbourne. They call the condition insulinoma but apparently do not know the reason for its occurrence. In an article they wrote on the subject the doctors said they were disturbed that the condition was frequently incorrectly diagnosed. They described two specific cases in which women suffered from years of coma, epilepsy etc, while being treated unsuccessfully with drugs.

There must be countless people suffering in varying degrees of hypoglycemia, being miserable and causing unhappiness to others for whole lifetimes. All because of a diet high in protein and refined carbohydrates.

Dr Mary Jane Hungerford, director of the Santa Barbara (California) branch of the American Institute of Family Relations reported:

"Nutrition is involved in 99% of my cases and in 75% of them it is the major . or factor. Almost all of my patients complain of fatigue, and fatigue is one of the first signs of poor nutrition. It certainly is the basis of a great many fights."

Dr David Hawkins, director of psychiatric research at Brunswick Psychiatric Hospital, Amityville, New York, estimates that 50% of couples applying for marriage counselling have serious nutritional problems. "All the couples were amazed at the fantastic difference a simple change in diet made to their lives, often in just a week," he said. The most common disorder was hypoglycemia, causing apathy, irritability, leading to arguments and resentment and displays of temper and poor sex life. He blamed primarily sugary foods and refined carbohydrates.

## Arthritis

Like other metabolic disease, arthritis is the product primarily of poor diet, but exacerbated by stress, smoking, lack of exercise and lack of sunshine. Many tests since 1940 have shown that arthritics display low blood serum levels of ascorbic acid (Vitamin C) and that in many cases their condition was improved or eliminated by large doses of Vitamin C. This does not mean that Vitamin C deficiency is by itself the cause of arthritis, but that it is often a factor involved along with other malnutrition factors.

**Gouty Arthritis:** Gouty arthritis is associated with high uric acid levels and high levels of blood fats. High uric acid levels are caused by:

1. Food high in nucleic acid which converts to uric acid (animal protein foods and some cereals).
2. High fat levels which impede the clearance of uric acid from the body.

Yeast contains 40% nucleic acid, and 5 mg per day for 15 days has been shown to raise the uric acid level from 4.9 mg% to 9.4 mg%. The causes of high blood fats have been discussed earlier.

When uric acid levels are high, the blood can no longer contain it all in solution and the uric acid forms

tiny sharp crystals. The lymphocytes, the white blood cells whose job it is to destroy invading foreign matter, attack the crystals. However, the lymphocytes are not capable of digesting the crystals and are instead killed by them, whereupon the cells' highly corrosive digestive juices are released, and it is these juices which attack the joints and cause the damage which is arthritis.

**Rheumatoid arthritis, osteoarthritis:** Poor circulation due to high fat levels causes edema (tissues swell with fluid), and the already poor oxygen supply in the joints is further inhibited. Deprived of oxygen, the white blood cells swell and finally burst and again the destructive juices attack the joints. A blow to the joint can trigger edema and induce arthritis but will only do so in association with high fat levels. "Housemaid's Knee" is an example, and men working with hydraulic jack hammers have their fingers affected. Tight gloves can have the same effect.

Dr K. Lund-Oleson in 1970 reported that when the synovial fluid from the knees of rheumatoid arthritis patients was examined, the fluid samples contained on the average, only 30% of normal oxygen levels. Those with only 25% or less could not bear weight on their joints.

Emotional stress is often a major factor in rheumatoid arthritis as it is in many other diseases, by its disruptive effect on the hormonal system and its effect of elevating blood fats. Dr Stephen Black in his book *Mind and Body* (William Kimber, London, 1969), states that the incidence of this disease is seven times greater among women than among men, and described how in the majority of cases the women are the intelligent active type frustrated by the role in life in which they find themselves, and unhappy in their relationships with men.

Osteoarthritis occurs when the damage takes place to cartilage.

If an arthritic person is placed in a pressure oxygen chamber, his pain is relieved because oxygen is forced through to the white cells.

Stress can induce arthritis because adrenalin causes a rapid rise in free fatty acids in the blood as described in *Heart Attack*. Refined carbohydrates, deficient in vitamins, produce an effect on the body the same as stress and when eaten are often responsible for triggering an attack of arthritis. White bread is bad, even wholegrain bread and other acid-forming cereal foods are conducive to arthritis. Salt and oral contraceptives adversely affect the blood and can induce edema with consequential arthritis.

The relationship between mental stress and various inflammatory ailments, such as skin rashes and arthritis, is being investigated by Dr Loris Chahl at Queensland University. She said her research was "getting somewhere" and that if a connection was proved, it would help to explain a lot of clinical problems. "Many people unsuccessfully sought treatment for skin complaints, such as soreness and redness, which appeared at times of stress," she said. The connection that Dr Chahl seeks to prove has already been explained and it is unfortunate that in this computer age duplication of research is still unavoidable.

In particular, deficiencies of vitamins of the B complex, C, E and B12 in the diet inhibit oxygen transport in the bloodstream. Such deficiencies are conducive to arthritis. On poor oxygen transport--to quote again from Dr Dintenas:

"It would be worthwhile to note that osteoarthritis and rheumatoid arthritis are associated with an elevation of plasma viscosity (Houston *et al*, 1949--Gasen *et al*, 1970) and an elevation of the degree of aggregation of red cells (Laine and Zilliacus 1950, Redioch *et al*, 1970). High blood viscosity always leads to a slow-down of circulation and to reduced oxygenation of tissues."

That the heart attack which killed Pope Paul was preceded by an attack of arthritis was no coincidence but a clear demonstration of impaired oxygen transport. As with many heart attacks, it is significant that attacks of arthritis frequently occur in the middle of the night, after a hearty dinner which has elevated the victim's blood fats.

Medical treatment for arthritis is quite useless. In gouty arthritis sometimes gold salts are injected as treatment. The white cells which envelop the gold particles instead of uric acid crystals, cannot digest

them either and so are immobilized, but do not burst. In some cases relief maybe felt by the patient.

Cortizone will destroy white blood cells and perhaps relieve some symptoms but is other-wise harmful. The body vitally needs white cells. Aspirin may relieve arthritis too, by its effect on suppressing the white blood cells. X-rays can also kill white cells. With inactive white cells, colds and infections will persist.

On the other hand, the adoption of correct diet reverses arthritis. There was a case at the Pritikin Center of a young man, a professional skier who, having injured his hip, was crippled with arthritis and eventually his femur (the large thigh bone) deteriorated and was apparently dead. He was given no alternative but to have an artificial hip joint but decided against it. When he arrived at the center, he looked lean and fit but his blood test showed the highest fat level they had ever recorded. It was because he used to eat only one meal a day, that being a 16 oz steak, no complex carbohydrate, followed by sweets. On the center's diet, for three weeks he could walk only 100 feet with pain. After five weeks he increased to half a mile, then a mile, without pain, and after six weeks progressed to three miles and straight away walked a whole 20 miles with no pain! An x-ray showed that the femur had regenerated with new bone tissue!

Jean Halewyn, 52, of Avalon Beach (Sydney), was a sad girl back in March 1979. She had arthritis throughout her body and could not bend her ankles or knees. She was in constant pain and had not been able to wear shoes for two years. Her own story appears in Chapter 2.

It was thrilling to see her in July, after about four months on the Pritikin diet and a gradually increased walking program, wearing shoes and gleefully dancing a little jig. It should be noted that the Pritikin diet encourages the too liberal intake of grain products which in many cases actually exacerbates arthritis. Jean Halewyn's recovery was due to her towered intake of fat and protein.

Thus the cure for arthritis lies, as with other metabolic diseases, in--

1. Adoption of a very low fat, low protein diet mainly of fresh, ripe fruit. Acid-forming cereals and legumes, as well as meat, eggs and dairy products, should be avoided. Unpolished rice is the best cereal because it is nourishing but contains less protein. Meals should be small but frequent, preferably uncooked.
2. Adoption of a moderate exercise program.
3. Elimination of emotional stress factors.
4. Elimination of smoking, alcohol, drugs etc.
5. Exposure to natural sunlight without spectacles or sunglasses.

## **Prostate malfunction**

The prostate is an organ, partly glandular, partly muscular, involved in male sexual and urinary functions.

Along with the degeneration of the rest of the body which starts becoming apparent in middle-aged men in our society, the prostate too declines in function and eventually becomes diseased. It has been estimated that at least 70% of men over 50 suffer from prostate trouble to some degree, and almost all men over 70. In many cases, cancer eventuates.

Early evidence of prostate trouble is increased frequency of urinating, sometimes with discomfort, difficulty in urinating, and lessening of sexual drive, these sometimes accompanied by aches and pains around the groin and lower back. Feelings of depression which sometimes also accompany these symptoms are, of course, another indication of body degeneration.

Whereas (as with other degenerative conditions) vitamin therapy alone has been shown to achieve alleviation of prostate problems, Dr Herbert Shelton, the famous nutritionist, has been for many years successfully treating patients by natural hygiene methods, which are based on a diet of raw fruit and vegetables, except that he recommends fasting in some cases. The elimination of stress, overwork, alcohol, coffee, tea etc. is important.

Enlarged prostates, he reported, are normalized in size and function in as short a time as seven days.

For best results it seems advisable to eliminate or at least reduce the amount of cereals in the diet. As I mentioned earlier, I know of one case in which two years on the Pritikin regression diet failed to correct the man's prostate trouble but when he stopped eating cereals the problem was eliminated in about two weeks.

## **Uterine fibroid tumors**

As middle-aged men dutifully follow the "civilized" pattern of prostate disease, so too do middle-aged women with their menopauses and other associated complaints. As simply avoidable as men's problems, benign fibroid tumors instead generate an enormous demand for hysterectomies, these days considered almost a natural event for middle-aged women.

## **Kidney disease (Nephritis or Bright's Disease)**

The main cause of chronic renal (kidney) failure is vascular disease, the same disease that eventuates in heart attacks, strokes etc. A renal infarction is similar to a myocardial infarction (heart attack) and the causes are the same.

Kidney disease is very prevalent in countries where excess protein and fat is commonly consumed. Another reason for the prevalence of kidney disease is the enormous consumption of headache powders and other analgesic drugs. Cooked meat is the worst food substance, and its implication with kidney disease has been known for hundreds of years. Constipation, which is the norm with the Western diet, causes further overload to the kidneys because toxins absorbed from the colon must also be excreted via the kidneys.

In his study of blood viscosity, Dr Dintenas points out "that elevation of red cell rigidity, increased concentration of red cells and proteins, is known to lead to kidney failure".

Kidney failure is also caused by overloading them with other toxins from food. Dr J. R. Johnson, nephrologist at Royal Prince Alfred Hospital, Sydney and Dr G. Holmes, a surgeon at Lautoka Hospital, Fiji, reported their study on Fijian Indians in the *Australian Medical Journal*. They postulate that "Curry Kidney" is akin to "Worcestershire Sauce Kidney", as described by researchers in England and Australia and which promotes susceptibility to kidney stones. Pepper, mustard, drugs, even black tea and radishes are harmful. The preventive measures are of course to adopt proper dietary habits.

Dr Mackenzie Walser, a Johns Hopkins Clinic Physician, has evolved therapy for kidney disease patients which almost eliminates toxic wastes. Practically all protein foods are eliminated and replaced by vegetables and fruit. Protein is supplemented by synthetic derivatives and amino acids called keto acids. Renal dialysis (kidney machine) he thinks can be avoided if kidney function is only 2% or better.

## **Kidney stones**

Kidney stones are usually composed of oxalic acid and calcium. Some are called urate stones and are caused by excessive uric acid formation.

They are all a result of faulty diet, and as with gallstones, will gradually dissolve and be eliminated when the diet is corrected.

## **Gallstones**



The body makes cholesterol sufficient for its needs, and a special supply of it is contained in the liver for the purpose of making bile acids. Excess cholesterol taken in the diet and not eliminated from the body is stored all through the body among the tissues. Fat causes a greater amount to lodge in the liver-- polyunsaturated fat twice as much as does butterfat.

Cholesterol only dissolves in the presence of lecithin and certain salts, but in high concentrations it forms into crystals, and it is a concentration of 95% cholesterol crystals and 5% other impurities that form gallstones.

If the gall bladder is removed, the formation will still occur and the stones form in the tube between the liver and the intestine. When cancer of the gall bladder occurs it is usually in the presence of gallstones. The incidence in USA of gallstones is one in every seven adults, one in every five people autopsied, and one in every three people over 60.

The Pima Indians of Arizona who now eat a diet of 50-55% fat content have the highest rates in the USA of diabetes, arthritis and gallstones: one in seven in the 15-24 year age group and three out of four in the 25-34 year age group.

On a "regression" diet containing no cholesterol, the stones are gradually reabsorbed.

Dr R. A. Sturdevant, *New England Journal of Medicine*, 288:24, 1973, reported a significant increase in gallstones in men on a diet rich in safflower oil. Dr T. Osuga, *Gastroenterology*, 63:122, 1972, showed that corn oil alone without cholesterol produced gallstones in monkeys.

## Hearing loss

It is the same story, as deterioration advances in the vessels feeding the hearing sensors, so does hearing deteriorate. The greatest sensitivity is required for the high frequencies, and in this range hearing first reduces. The average Western standard comparing age with high frequency capability is:

10 years--18,000 cycles per second  
20 years--16,000 cycles per second  
35 years--12,000 cycles per second  
50 years--11,000 cycles per second  
60 years--8,500 cycles per second

Just as heart disease relates directly to blood cholesterol, so does hearing loss.

African natives on low-fat/cholesterol diets were compared with people in Wisconsin, USA. Wisconsin is the dairy center of USA. Natives of 79 years had the hearing of Wisconsin 30-year-olds. Natives aged 59 were the equal of Wisconsin boys of 10.

Autopsies have confirmed that poor hearing is synonymous with closed arteries. Smokers suffered a greater loss than nonsmokers. Partially deaf people experience marked improvement in hearing, some completely, when subjected to oxygen under pressure.

Honolulu is the "Jogging Center of the World" and medical people are becoming more interested there now in prevention of heart disease. They arranged what they called "Heartbeat Day" and a thousand people attended the center for a check-up. With so many people the nurses were asked to help with the tests and they found that the nurses, using stethoscopes, detected three times as many high frequency "murmurs" as did the doctors. When they switched about in order to check the nurses' techniques they found the same disparity.

It was realized that the nurses, who were aged in their twenties, could hear better than the doctors, who were in their forties.

## Hernia, hiatus hernia

Hernia and hiatus hernia are actual physical damage caused by excess pressure and strain by abdominal muscles when sitting on the toilet. On a proper diet such pressure and strain is not required and hernia does not occur. Bowel evacuation is much easier in the squatting position as used in the Asian countries.

## Eye disorders

Good eyesight, like all other functions, relies on the supply of healthy oxygen-rich blood.

As people on Western diets get older their eyesight deteriorates because of poorer circulation caused by atherosclerosis and fatty blood. The visual field of a 20-year-old which may be reduced to 95%, is at 70 usually reduced to 75%.

The visual field of a healthy young man can be reduced on restricted oxygen in 10 minutes. Smokers, their oxygen constantly depleted by carbon monoxide, after two weeks of stopping smoking, can increase their limited visual field by 36%.

A middle-aged woman after two weeks at the Longevity Center thought the dining room had been changed to a different, large room one day when her peripheral vision returned.

Over a period of a year or two on the "regression diet", eyesight, hearing etc. further improves as the blood vessels clear out. After 20 years, Nathan Pritikin, at 69 had the eyesight and hearing of a boy.

**Glaucoma:** Glaucoma is caused by increased pressure of the fluid in the eyeball. The pressure is supplied by clear fluid from the bloodstream carrying oxygen as well, and by correct regulation of the pressure, the eyeball maintains correct shape. The pressure is regulated by the amount of outflow from tiny exit apertures.

On a high fat diet these apertures tend to block and so the pressure in the eye increases. Now the blood pressure in the tiny vessels supplying the eye is one-third that of the person's diastolic pressure, so when the pressure in the eye causes the eye to swell and apply a "pinching" force on a vessel, the blood supply from that vessel shuts off. This results in partial blindness, and can progress to total blindness.

The higher the diastolic pressure, the harder the eyeball must press to pinch the vessel before blood supply is reduced. The pressure in the eye can be measured with delicate equipment which does not even touch the eyeball. The reading is made in millimeters of mercury, the same scale as blood pressure. Depending on the blood pressure, glaucoma occurs above about 24 mm of pressure in the eyeball.

Glaucoma may not be constant and sometimes will be induced by an increase of fatty acids in the blood.

Surgical methods to relieve glaucoma are to slit the exit aperture to drain off fluid; sometimes a tiny hole is made in the eyeball. Surgery is totally unnecessary of course, because proper diet and exercise will correct the cause, and the condition will no longer exist.

**Cataracts:** Cataracts are a condition where the lens of the eye gradually loses transparency, and are due to deposits of cholesterol crystals. When glaucoma is present and drugs or surgery are used, the incidence of cataracts becomes much higher.

**Arcus Senilis:** Arcus senilis is where a pale whitish ring appears around the outer section of the iris and again is caused by cholesterol and fat in the cornea. As the name implies, it denotes senility, as once it appeared mainly in old people, but nowadays it appears commonly in young people too, particularly heavy meat eaters.

**Detachment of the retina:** This too is caused by poor oxygen supply due to lipotoxemia, and to a large extent is repairable by proper diet.

None of these eyesight malfunctions occur when a person uses a lowfat, low cholesterol diet. In his book *The Healing Factor*, Irwin Stone recounts many medical research papers too numerous to repeat here which described the association of low Vitamin C levels with all of the eye problems mentioned. Also described were cases of dramatic reversals of these conditions by large doses of Vitamin C taken orally or intravenously. However I mention this not to encourage the adoption of the synthetic vitamin habit but more to encourage the adoption of proper dietary habits.

In the USA in 1979 about 112 million people--51% of the entire population --wore glasses or contact lenses, according to the US Federal Trade Commission. Corrective lenses are used by 88% of the population over the age of 45 and by 93% over 65.

Mr Frank Smith of Punchbowl, Sydney, once showed me his collection of antique bottles. Some of them still had labels on them and he could read without glasses, in artificial light, the small print on them. This surprised me, because Frank was 73 at the time. I checked him out on some other fine print and he could easily read it. He did not have glasses. He did very little physical exercise lately, he told me, but his diet was almost vegetarian and he ate a great deal of cole-slaw. After three years on an improved diet, my wife could read again without glasses.

### **Asthma, bronchitis, pneumonia, pleurisy, emphysema**

These are conditions which occur in breathing tubes and lungs of physically run-down people with high blood fats, particularly smokers.

They are quickly rectified by improved nutrition and exercise.

Emphysema, the condition where a lung is over-inflated and ventilates (expands) only partially, will respond to both aerobic exercise and improved nutrition, and the Pritikin Center counts on restoring function in three to four weeks. On a more severe diet based on raw fruit and vegetables results are even better.

### **Asthma**

Asthma is the restriction of breathing caused by the swelling of the bronchial tubes through which air is inhaled into the lungs and carbon dioxide exhaled. The swelling is due to a toxic bloodstream and is exacerbated by emotional stress in the same way as other disease conditions are exacerbated when excessive fat enters the bloodstream. Irritation by airborne particles such as pollen may also worsen the situation, but like stress, is not the primary cause of the disease.

Asthma quickly clears soon after a very low fat diet is adopted to clear the blood of lipotoxemia, which benefit is often achievable by regular exercise alone, but most effective of course is it to rectify all factors together.

### **Osteoporosis**

Osteoporosis is a condition of degeneration, usually associated with elderly people, in which the bones become light and porous and weak. In some cases the bones in the leg may be so weak that one will break, causing the person to fall. Frequently it is thought that the fall caused the break, but it is the other way around.

It is commonly thought that the condition is caused primarily by a deficiency of dietary calcium, but this is not so. There are two main causes:

1. Calcium is withdrawn from the bones in an effort by the body to neutralize acids formed as result of

excess dietary protein. This occurs regardless of the amount of calcium in the diet.

2. Lack of exercise. Bones atrophy, just like other organs, if they are not exercised. A demonstration which proves this can be observed in cases of stroke patients paralyzed on one side. Osteoporosis occurs in the bones of the inactive limbs but not in the active ones.

The process, gradual over the years, is accelerated by smoking.

## **Acne, pimples, lupus, dandruff and other skin disorders**

Acne, pimples and other skin disorders are usually associated with diets similar to those causing hypoglycemia, but can also be caused by other dietary deficiencies which are simple to rectify.

Whereas lipotoxemia is the main factor, the effect of stress causes further deterioration of the blood circulation and can precipitate skin rashes in addition to other body malfunctions.

Lupus, still considered incurable (like all the others), quickly responds (like all the others) to correct dietary procedures.

## **Gastric ulcers**

Gastric ulcers are caused by excess acidity in the stomach stimulated by digestive difficulties associated with high levels of fat and cooked protein. They are exacerbated by stress, poor circulation and lack of exercise.

An operation involving cutting a branch of the vagus nerve is often used to moderate the flow of acid to the stomach and allow the ulcer to heal.

There is a drug, Ametidine, which stops the acid flow; it must be taken five times a day for life. Other drugs merely neutralize the acid. Ulcer sufferers are frequently put on a diet of milk and soft foods containing a lot of milk so as not to aggravate the ulcer. Eventually these people acquire a high degree of cardiovascular disease.

On the other hand, just by improving body metabolism with diet and regulated exercise frequently will regulate the cause of the ulcer and it will heal.

Tests on guinea pigs (See *Vitamin C*, Chapter 15), demonstrate that ulcers developed in 26% of the animals when their diet was deficient in Vitamin C, but of 80 animals fed the same diet supplemented with ascorbic acid (Vitamin C only one developed ulcers).

A properly constructed diet avoids the necessity of taking supplementary vitamins but as discussed in Chapter 15, Vitamin C may not always be easy to get in the food available.

## **Varicose veins, hemorrhoids and thrombosis**

These are veins in which the flow of blood has stagnated, the veins swell and are blue in color, due to the blue-colored stagnated blood.

As mentioned earlier, blood flow returning to the heart is assisted by muscular movement, the calves of the legs can provide one-third of the pumping effort required when walking. Thus, standing motionless and being generally sedentary will allow varicose veins to occur. People on low fiber diets are susceptible to varicose veins. Pressure in the large intestine caused by slow moving hard waste matter, exerted in the pelvic region of the body, can impede the return blood flow from the legs and help to cause varicose veins.

The word phlebo means vein, and when stagnant blood forms a clot (thrombo), you have the condition of phlebothrombosis.

If the veins then become inflamed the condition is called thrombophlebitis or phlebitis. Should the clot break free and move along the bloodstream it is then called an embolism which in Greek means "plug" and indeed if it reaches the lungs it may plug the pulmonary artery and cause sudden death--sometimes mistaken as a heart attack. This condition is called pulmonary embolism. Excess pressure from the large intestine retards the returning blood from the veins in the rectum causing them to stretch and swell, becoming hemorrhoids or "piles".

Regardless of dietary habits, none of these conditions occur in people who follow a proper exercise program, preferably walking, jogging or running. Adopting such a program and correcting the diet will gradually cure such conditions.

## **Analgesic addiction**

Dr Geoffrey Duggin, a renal physician at Royal Prince Alfred Hospital, Sydney, writing in *New Doctor*, April 1977, called his article "The Australian Disease--Analgesic Abuse". He said that at 40 gm of phenacetin per capita per annum in 1967, it meant that for every man, woman and child in Australia, approximately 200 headache powders each were consumed. Even though phenacetin has been replaced by paracetamol and salicylamide, the consumption of analgesics continues unabated.

Australia's nearest rivals, the Swiss, run a very poor second with only 22 gm each per annum. The Swedes previously were close contenders of the Swiss, but have declined in consumption since the government banned the sale of phenacetin-containing analgesics, and restricted sales of analgesics. The USA consumption per capita was only 7 gm.

Diseases resulting from analgesic abuse are kidney (renal) disease or nephritis, peptic ulcers, gastrointestinal bleeding, anemia and iron deficiency, and cancer of the kidneys and urinary tract. Increased perinatal mortality and low birth weight of babies occur when women consume analgesics during pregnancy.

Dr Duggin said that approximately 300 patients per year in Australia enter chronic hemodialysis and renal transplant programs as a result of analgesic nephropathy.

Because of the high intake of pain-killing drugs, Australian women have the world's highest incidence of kidney cancer. Clinicians at Westmead Hospital, NSW, and the NSW Cancer Registry revealed this fact in 1981. Among women who took these drugs regularly, the incidence of kidney cancer was ten times the average incidence.

Analgesics do not cure anything, they merely suppress symptoms. Aspirin will bring relief but affects and inhibits the action of the white protective blood cells and allows infection to persist. Taking aspirin will cause a cold to hang on. The Australian Kidney Foundation says the most common cause of kidney failure in Australia is abuse of pain-killing tablets and powders. Aspirin is the leading cause of poison deaths in little children.

The majority of aspirin takers are women.

## **Caffeine addiction**

Caffeine is an addictive drug which causes stimulation of the nervous system. Such artificial stimulation is harmful and upsets the natural levels of blood fats, blood glucose and acid secretion in the body. Increased blood fats adversely affect the circulation, and it has been observed that erratic heartbeats and fibrillation can follow ingestion of caffeine. These effects are particularly dangerous to people with cardiovascular problems.

Dr Charles Kovan of Hollywood, California, quoted in the *Medical Journal of Australia*, said that caffeine addiction was one of the most subtle abuses in the world. Caffeine is contained, not only in coffee, but in tea, cocoa, cola drinks and chocolate. One cup of coffee contains 100-150 mg of caffeine which has an effect on the nervous system equal to 2 mg of amphetamine. Decaffeinated coffee contains up to 6 mg of caffeine, tea up to 100 mg, cocoa up to 50 mg and cola drinks between 15 and 40 mg.

Dr Kovan said many people's dependence on tranquilizers and sleeping pills was due to caffeine. He associated caffeine with symptoms of anxiety, headache, tremors, gastritis, irritability, agitation, dyspnea, tachycardia, insomnia and cardiac failure. In the USA the Food and Drug Administration is investigating if the high intake of cola drinks is causing development disorders among children. The sugar content alone is dangerous enough.

Caffeine has been shown to cause lump formation in women's breasts and is considered to be a contributory cause of cancer.

## Smoking

There is so much publicity on the damaging effects of smoking that further discussion here would be superfluous. The official statement, "smoking may be dangerous to your health" and "smoking is a health hazard" would infer that if you are lucky, smoking won't hurt you. Don't kid yourself.

All records show that smokers 35-54 years old have four to five times the mortality rate of nonsmokers. This is because smoking drastically compounds other adverse factors generally present. Cancer of the bladder is prevalent in smokers as well as cancer of the lung.

Looking at many men it is obvious it is not much good appealing to their vanity, they have not got a great deal. Anyway, women generally have. The *Los Angeles Times*, December 29, 1977 reported that "Two major studies in the Boston Collaborative Drug Surveillance Program, covering 5,500 women in the US and six other countries found a direct link between smoking and early menopause".

This means that apart from cancer and heart disease which you cannot see, smokers plainly get older quicker, they wrinkle and look older.

Do not be misled by claims about low tar or low nicotine, filters etc. Tar and nicotine are bad news but it is now recognized that the most lethal factor in smoking is the carbon monoxide, and with filter cigarettes, smokers inhale more carbon monoxide.

## Alcoholism

In an article in the *Weekend Australian*, February 25, 1978, The Australian Foundation of Alcoholism and Drug Dependence produced records which associate alcohol with:

- One in every two road deaths.
- One in every five hospital admissions.
- One in five child bashings.
- Two in five divorces and separations.
- Three in four criminal assaults.

In comparing alcoholism with heart disease and cancer it should be taken into account that the incidence of heart disease and cancer is directly increased by alcohol and it is clear that alcohol contributes to the overall death rate more than is generally suspected. The president of the NSW branch of the AMA, Dr C. Reed, said there was ample medical proof that alcohol presented the greatest drug problem in Australia (*The Australian*, January 16, 1979).

Nutritional deficiencies in a person's diet have been shown to predispose them towards alcoholism.

Alcohol causes more mental and physical damage to women than it does to men, according to observations by British doctors. Dr Marsha Morgan of London's Royal Free Hospital said that allowing for the amount of alcohol compared to body weight, women suffer much greater liver and brain damage.

A tragedy arising from alcoholism, known as "fetal alcohol syndrome" (FAS) was described by Dr Edith Collins of the Children's Medical Research Foundation. Pregnant women who drank as little as three or four drinks a day gave birth to babies averaging 150 gm less than babies of nondrinkers. Babies can be affected not only by regular drinking but by "binge" drinking, particularly in the first three months of pregnancy and in later stages when the brain was developing. Growth retardation continued after birth.

Babies affected by FAS display abnormal facial features such as narrow forehead, narrow eye openings, short upturned nose and low bridge, wide mouth, receding chin. Other abnormalities were faulty spine, extra toes, heart valve defects, and varying degrees of mental retardation.

Dr Jim Rankin of the NSW Health Commission said in 1978 that Australians spend a constant 6.4% of their income on alcohol. "Consumption has gone up 50% in the last 10 years because people have more money and alcohol is relatively cheaper than what it was. The safe level of drinking may be a lot lower than people think."

## **Menstrual problems**

Up to ninety per cent of women suffer needlessly from pre-menstrual tension during their child-bearing years, according to Dr Niels Laverson, Associate Professor of Obstetrics and Gynecology at Cornell University. "But simply by giving up or severely restricting the amount of salt in their diet, many of them can cut out the aggravating feeling of moodiness, depression and bloatedness."

Dr Laverson, co-author of *It's Your Body--A Women's Guide to Gynecology*, explained:

"The week before a woman has her period, there is a build-up in her body of two hormones--progesterone and estrogen. Estrogen binds salt to the body and salt binds water. The result is a build-up of water which causes pre-menstrual tension, excess fluid in the brain causes headaches. Fluid in other parts of the body causes fatigue."

Dr Lot Page, Professor of Medicine at Tufts University School of Medicine in Boston, made a similar statement in complete agreement with Dr Laverson.

It has already been mentioned that estrogen levels become excessive on a high fat typical American diet.

Women who eat a vegetarian diet containing mostly raw food experience only brief periods, scarcely noticeable, with hardly any loss of blood. Dr H. G. Beiler\* in his book, *The Natural Way to Sexual Health*, explains that women experience troublesome periods only because of the toxic condition of their blood brought about by the high fat and protein Western diet.

\*Also the author of *Food is Your Best Medicine* (Vintage Books, NY).

An excellent article in the *National Health Federation Bulletin* (Australia), June 1980, by Diane Watkin on this subject, confirmed Dr Bieler's contention with descriptive information from 12 different doctors and from a number of women relating their own experience.

## **Mental disorders**

If all organs of the body can be hampered and indeed injured by faulty chemistry caused by faulty nutrition it is a wonder mental diseases are not more severe.

Particularly when you consider that the brain, with its fantastically delicate complexity, having the capability of a room full of computers miniaturized in a small bundle within your head, depends upon a

pure rich blood supply to function.

Nathan Pritikin described how children whose diets were changed from the typical Western high-fat diet to a diet low in fat, could perform simple mental tasks 20% faster and with greater accuracy once their blood cleared of fat. If children are so handicapped--and it has been shown that so too are senile old people--what then about everybody in between? Does our entire population struggle along at about 75% of their mental capacity? Is this why our television programs are so infantile? It would be interesting to observe the progress of the Western nations if suddenly their addiction to the Western diet was broken.

In earlier chapters it has been described how subtle incapacitation of mental processes can be caused by oxygen deprivation, how people become more composed after becoming vegetarian, and how hyperactivity can be induced in some people by artificial coloring and flavoring in food.

Alcohol can produce mental elation, aberration, criminal tendencies, depression and violence. Refined sugar can cause hypoglycemia and similar effects to those of alcohol. Smoking causes nicotine to affect the central nervous system and carbon monoxide to affect brain efficiency. Smoking "pot" has weird or wonderful effects on the mind.

The effects of caffeine and analgesics have been described and how they create further dependency on tranquilizers and sleeping pills. Other drugs are legion and cause frightening processes in the brain. Eating certain mushrooms and herbs can cause hallucinations.

Consider now, besides all that, that several thousand chemicals are used in various combinations, to preserve, color and flavor food which is already of doubtful value. Add now large quantities of sugar and fat. Is it surprising that these problems of aggression, mental aberrations, hyperactivity, dullness, sluggish reactions, hallucinations, depression, migraine, insomnia, violence and premature senility occur?

In previous chapters, it was described how mental aberrations and senility are associated with cardiovascular disease. Once again I would like to quote Dr Dintenas:

"A hypothesis by Walsh (1968) is that presenile dementia is a result of arterial insufficiency of the brain consequent to thrombotic processes in the arteries supplying the brain. This hypothesis is reinforced by the findings of Alvarez (1966) that senile and presenile dementia is often preceded by 'little' strokes. Walsh (1969) showed that presenile and senile dementia can be prevented by anticoagulant therapy, thus substantiating the fact that mental disorders might be a direct result of occlusive circulatory disorders."

At least one case from the Pritikin Longevity Center demonstrates this to be true. Quoting from their newsletter No 3 (April 1976): Senility--an 83-year-old male with increasing senility in the last year so that he was unable to communicate, walk by himself, and maintain toilet control. By the end of the session (4 weeks) he had completely regained his mental faculties and could carry on a spirited conversation. His ability to walk by himself returned and he experienced a substantial return of other lost functions.

Even depressive or schizoid anxiety can be related to an elevation of blood viscosity factors. A comparison with normal values (Dintenas and Zador, 1974-5) showed a significant elevation of blood viscosity factors in 52 patients studied. And further Dr Dintenas says:

"Tests have shown similar association of psychosomatic pain. This can happen in any part of the body. Pain syndrome without physical findings, but exhibiting abnormal blood viscosity and protein patterns, was observed in neurotics and psychotics as well. It is therefore likely that the pain is real."

As increasing blood viscosity leads to reduced oxygenation of the tissues it becomes obvious that the pain is real and results from tissue distress because of oxygen deprivation.

## **Sudden Infant Death Syndrome (cot deaths)**

In the month of June, 1978, publicity was given in the press to the work of Dr Archie Kalokerinos of Sydney, and his demonstration of the use of Vitamin C in preventing SIDS (Sudden Infant Death



syndrome).

Dr Kalokerinos has been trying to convince the medical establishment for over forty years. His book, *Every Second Child*, describes how he demonstrated that lack of Vitamin C was responsible for the dreadful mortality rate among infants in the country town of Collarenebri, NSW, back in 1957. The townspeople's diet was generally deficient in Vitamin C, particularly the Aborigines whose infants suffered the most. For the next 10 years that he was there, there were no further deaths of infants from this syndrome. A further description of his work is given in *The Scientific Australian*, June 1978.

In addition, Dr Kalokerinos described in his book how Vitamin B deficiency in pregnant women and babies may be responsible for SIDS. Later research by Professor David Read of Sydney University substantiated this belief. The Vitamin B1 deficiency was caused by the intake of sugar and other refined carbohydrate.

Particular note should be made of another report from Chicago. In a large-scale enquiry by the Infant Welfare Center of Chicago, 20,061 infants attending the center were closely followed up for the first nine months of their lives. Of these infants 48.5% were wholly breast-fed, 43% partially breast-fed and 8.5% wholly artificially. The artificial feeding was done to a definite plan, and all infants -artificially fed or otherwise--were attended by official s of the center. The mortality rates of these infants were:

	No. of infants	Total Deaths	Death Rate
Wholly breast-fed	9,749	15	0.15%
Partially breast-fed	8,605	59	0.7%
Artificially fed	1,707	144	8.4%

"It will be seen that the death rate among the artificially fed infants is 56 times greater than among the breast-fed. Whereas only four of the 9,749 breast-fed infants died of respiratory infections, 82 of the 1,707 artificially-fed infants died from this cause."

That enquiry took five years, from 1924 to 1929. I wonder if it ever made the headlines. I wonder what the survivors are like today? I was born in 1924 and spent the next forty years in blissful ignorance of nutrition.

The disadvantages of feeding cows' milk to children have already been discussed, and I repeat--whereas mothers' breast milk contains adequate Vitamin C, cows' milk is essentially devoid of it. In addition, cows' milk presents a problem of excess protein and sodium, and it lacks entirely the substances contained in mother's milk which provide immunity to infections. Babies secrete few enzymes; they rely heavily on the natural enzymes (35+) in their mothers' milk, not only for digestion but for other life-sustaining functions as well. Bottle milk, formula or canned food contain no enzymes at all.

The dangers of excessive protein consumption have been discussed at length. Hara Marano, editor of the magazine, *Medical World News* (USA) writes:

"But the greatest protein hazard is probably among infants. Cows' milk--the basis of most formulas--contains twice the protein of human milk. Given the tendency to over-feed bottle-fed infants and the early feeding of solid foods, the protein intake of many infants in the USA is so high as to leave them at the threshold of hypernatremic dehydration--a condition caused by water lost in flushing out a large waste load.

"Hypernatremic dehydration is four times more deadly than the water loss that accompanies diarrhea in infants, and can lead to brain damage, shutdown of the kidneys, and death within hours."

## **Alzheimer's disease**

Senile dementia can be caused by arterio-sclerotic degeneration of the brain and also by atrophy of the brain when there is no evidence of atherosclerosis. The latter condition is called Alzheimer's disease and

no doubt in many cases the causes of both exist together producing the same symptoms anyway, the results being additive.

Researchers have for years suspected that aluminum taken into the body in food cooked in aluminum utensils or contained in aluminum foil or cans is a causative factor in Alzheimer's disease. A test at the University of Toronto showed that even visible aluminum particles emitted from air conditioning units were sufficient to kill human cells in laboratory cultures.

Recently, Dr Daniel Perl of the University of Vermont reported finding high levels of aluminum and low levels of calcium and magnesium in the soil and water supply in areas of Guam and New Guinea and that similar imbalance of these minerals were found in the brains of natives of these areas who had died from degenerative disease of the nervous system. Populations of natives drinking water high in aluminum suffered a correspondingly high incidence of dementia. In 1980 a Yale University study showed that elderly people with high aluminum levels had a higher incidence of nervous disease, including failing memory and impaired visual-motor co-ordination.

Animal tests have shown that similar effects occur to animals when aluminum is injected into them.

There is no doubt that aluminum is a toxic metal just as are copper, mercury, cadmium and lead. It should be noted that aluminum is used also as an ingredient in various cake mixes, salad dressings, pickles, baking powders, processed cheese, antacid medicines and aspirins. Many lipsticks, skin creams and lotions also contain aluminum. In some areas drinking water supplies are purified with chemicals containing aluminum.

Dr Arthur Furman at the Health Conference at the Sheraton Hotel Washington in 1984 described how, at the University of Maryland, he once used to demonstrate the toxicity of aluminum. At the beginning of his lectures he placed two goldfish each in a separate bowl, one containing water which had previously been boiled in an aluminum saucepan. By the finish of the one hour lecture, he said the second goldfish would be dead.

The accumulation of aluminum in the brain is a very slow process of course just as is the atherosclerotic process so often accompanying it. Both processes can be arrested simply by cutting out the causes.

Dr Richard Casdorff, MD, PhD, of Long Beach, California and Dr Donald McLachlan of the University of Toronto have both used chelation therapy (see Chapter 12) with Alzheimer's disease patients and have reported positive results.

The writer has good reason to accept the foregoing information. Having lost my father (aged 74) with a stroke, and having later discovered the benefits of the Pritikin diet, I felt confident I could preserve my mother who was alert and receptive, on the Pritikin program. Having met Mrs Eula Weaver (picture Chapter 2), I felt certain my mother, starting younger and in better shape, could easily make 100. I was wrong.

Her diet was very low in fat, cholesterol and salt, but she did not relish raw food, and so her diet contained a fair amount of wholewheat bread, cooked rice and vegetables, with little fruit. She walked several miles vigorously each day. Notwithstanding, from about age 80 she went into steady mental decline and finally exhibited the classic symptoms of Alzheimer's disease and died at 85.

Why did she decline when Mrs Weaver did so well?

A number of things possibly explain my mother's decline. She was fond of sweets (but did not eat a lot of them), she cooked most of her food, her diet contained a high proportion of cooked cereal and was low in Vitamin C, she drank a few cups of very weak tea each day (unsweetened) and--significantly -her cooking utensils were aluminum.

## **Subtle fluoride poisoning**

Fluoride, which is added to our water supplies to "prevent tooth decay" is recognized, worldwide, as one of the worst industrial pollutants, as an effective rat poison and a destroyer of moulds and fungi. Poisons work because they inhibit the actions of enzymes, without which no life exists, and even in minute trace quantities fluoride is harmful, as like lead and mercury, it accumulates in the body.

Even at the level of one part in a million which is the level put in the water supplies, the activity of enzymes is greatly inhibited. Information has been published by the US National Academy of Sciences and the World Health Organization showing that at this level (1 ppm) certain enzymes were inhibited by 50-100%

The effects of fluoride poisoning, described by Dr John Yiamouyiannis in his book *Fluoride, The Aging Factor* range from impairment of the immune system, calcified ligaments, tendons, and muscles, arthritis, irregular bone growth, osteoporosis, weakened skin collagen, scleroderma, wrinkling, and premature senility. The United States Pharmacopeia (guide to drug information) lists some of the side-effects possible on an intake of only one to two pints of fluoridated water per day: pain and aching bones, weakness, brown teeth, stiffness, loss of appetite. These symptoms are universal in the village of Kizilcaoren, Turkey, where the soil contains so much fluoride the level in the drinking water is about five parts per million. In Kizilcaoren the people are generally prematurely aged at 30 and most do not live past 50.

Examining the cancer death rates in California, Dr Donald Austin of the California Tumor Registry found the cancer death rate in fluoridated water areas was 40% higher than in unfluoridated areas. In Canada, Dr Victor Cecitioni, comparing various Canadian cities found a similar differential of 15-20%. A general comparison of cancer death rates for 1970 of all cities in USA with populations greater than 250,000, showed a 4% higher rate for fluoridated cities.

In Europe, fluoridation is banned in Sweden, Denmark and Holland, it has been abandoned in Belgium and West Germany and it has never been used at all in France, Italy and Norway.

The US Center for Disease Control and the British Ministry of Health both admit that no laboratory study has ever shown that fluoridated water is effective in reducing tooth decay. They also admit that there are no epidemiological studies on humans showing fluoridation reduces tooth decay that meet the requirements of scientific objectivity.

A study made in Holland reported in *Science News*, September 9, 1979 showed there was no reduction in dental caries by the use of fluoride tablets or toothpaste.

What has been overlooked by fluoride supporters when they point to the significant reduction in tooth decay over the past twenty years is that the same reduction has occurred in unfluoridated areas as well.

Back in September 1943, the *Journal of the American Medical Association* (Sept 18) pointed out: "Distribution of the element fluorine is so widespread throughout nature that a small intake of the element is practically unavoidable. Fluorides are general protoplasmic poisons, probably because of their capacity to modify the metabolism of cells by changing the permeability of the cell membrane and by inhibiting certain enzyme systems. The exact mechanism of such actions is obscure. The sources of fluorine intoxication are drinking water containing one part per million or more of fluorine, fluorine compounds used as insecticidal sprays on fruits and vegetables and the mining and conversion of phosphate rock to superphosphate, which is used as a fertilizer". The *JAMA* went on to describe how further intoxication was caused by fluoride emitted into the atmosphere as a result of this fertilizer manufacture as well as with the smelting of steel and aluminum, and the production of glass, enamel and bricks.

In October 1944, the following statement was made by the American Dental Association: 'We do know that the use of drinking water containing as little as 1.2 to 3.0 parts per million of fluorine will cause such developmental disturbances in bones as osteosclerosis, spondylosis and osteopetrosis, as well as goiter, and we cannot afford to run the risk of reproducing such systemic disturbances in applying what is at present a doubtful procedure intended to prevent development of dental disfigurements among children . . .

"In the light of our present knowledge or lack of knowledge of the chemistry of the subject, the potentialities for harm far outweigh those for good."

Fluoridation was carried out in many areas despite these warnings and despite the fact that no proper tests or studies have been done. There has been bitter controversy over the issue ever since. Dr Yiamouyiannis has led the fight against fluoridation and was strongly supported by Dr Dean Burk, formerly Chief of Cytochemistry, National Cancer Institute USA.

In the USA in recent years, three major courts have ruled that fluoridation is dangerous to health: Judge Flaherty, Pittsburg, November 1978; Judge Niemann, Illinois, February 1982, and Judge Farris, Houston, May 1982.

According to Dr Brian Dementi, Chief Toxicologist of the Virginia Department of Health: "It appears that Drs Yiamouyiannis and Burk have correctly approached the problem and that their findings stand successfully unrefuted".

## **Mercury poisoning from teeth fillings**

Gradual poisoning from the mercury contained in teeth fillings has long been suspected as a cause of various chronic disease conditions.

Dr H. Schwarzkopf of Germany has reported many cases of over the past thirty years where chronically sick patients have been restored to health after having their amalgam fillings removed and replaced with gold or more recently developed inert substances. Diseases which have been eliminated by this procedure, Dr Schwarzkopf reports, are cancer, erratic heartbeats, pancreas weakness, erratic menstruation, headaches, Thyrotoxicosis, endocarditis, hyperthyroidism, neuralgia, muscular pains and rheumatism.

According to Dr Richard Kunin in his book *Meganutrition*, there have been numerous reported cases of central nervous system problems in dentists and dental assistants as a result of handling amalgam. Dentists have over a long period of time developed gait problems, irritability, nervousness and occasional episodes of vertigo.

Some people have found that by having their amalgam fillings removed and replaced with gold or other inert substances they have improved immensely in health. One instance is the case reported in 1983 of a woman, Mrs Gun Thoreson of Burea Sweden, who had been gradually going blind together with dizziness and myositis (inflamed muscles). After the removal of the silver fillings she at first experienced fits of anguish and burning sensations in her eyes, and in six months she had recovered 90% vision again.

Researchers have found that weak electric currents may be generated by the galvanic action between different metals such as copper, tin, zinc and mercury of which the amalgam filling is made. Sometimes a gold crown may be put on top of an amalgam filling. These electric currents, it has been claimed, are capable of disturbing the neurochemistry of the body and causing chronic distressing symptoms.

## **Homosexuality**

Significant findings at the Brigham Young University in the USA indicate that stress during pregnancy can result in homosexual offspring. Dr D. E. Fleming and Dr R. W. Rhees, in experiments, subjected pregnant rats to psychological, nutritional, and hormonal stress and then measured the behavioral characteristics of their male offspring. The results were compared to "normal" offspring of unstressed rats.

"We found demasculinization and feminization tendencies," reported Dr Fleming. "Demasculinization, in that the test rats were not as active sexually in the male role; feminization was found where the males exhibited female-type behavior when placed with other males who were sexually aggressive. We are exploring possibilities that may have relevance to humans," Dr Fleming explained.

The researchers observed that a definite correlation exists between the endocrinal systems of rats and humans.

The predisposition towards homosexuality of male rats of the stressed mothers occurs because when the mother is under stress her body produces hormones that suppress production of androgen, necessary for the development of maleness in a male, although the male physical make-up appears normal. This occurs in the critical third trimester of the development of the fetus.

The defect can be corrected by environmental influences--feminized male rats, when placed for long periods of time with females, will begin to exhibit normal male behavior.

Three groups of mother rats were each subjected to a different form of stress, and in each group 50% of the male offspring were affected.

Other scientists, at Temple University, reported that when stress was applied late in pregnancies, the female offspring, when grown, have significantly more trouble in becoming pregnant and giving birth to viable young.

In the discussion on the merits of raw food in Chapter 15, mention was made of the tendency to homosexuality among the offspring of cats fed a defective diet.

The hypothesis of these scientists is that maternal response to stress, involving complex hormonal variation, may interfere with the process of sexual differentiation in the developing fetus.

## **Migraine**

As already described in preceding chapters, migraine is usually caused by poor circulation associated with high viscosity and the toxic effects of salt, fat, caffeine and so on. The Gerson diet was originally developed in 1920 because Dr Gerson himself had been a migraine sufferer and thereafter none of his patients failed to rid themselves of migraine, and as he later discovered, all their other problems too. Had Dr Gerson read his countryman, Louis Kuhne's, book *The New Science of Healing*, written some thirty years previously, he would have been saved a lot of experimentation and a lot of headaches.

In September 1984 the British medical journal, *Lancet*, described medical research conducted in a number of London hospitals which showed "conclusively" that allergies, particularly allergies to milk, wheat and eggs, were a direct cause (but not the only cause) of migraine.

## **AIDS**

It is clear that AIDS is just another indication of the decline of modern civilization. AIDS sufferers, whether they be homosexuals or low socioeconomic groups, all display backgrounds of poor nutrition, abnormal or depressed mental states, and often other debilitating lifestyle habits as well such as the frequent, regular use of "recreational" drugs, alcohol, antibiotic and other medical drugs. It is not surprising that Kaposi's sarcoma, a type of skin cancer, is often associated with AIDS.

Cancer patients display in their tissues and cells a type of virus which some doctors in the past have suspected to be the actual cause of cancer, but it is known that the same virus is carried by all people and proliferates in chronic degeneration, even when cancer is not evident (see Chapter 20). It has been shown that the "AIDS virus" (HIV) is not really the cause of AIDS at all, but rather just an indication of chronic degeneration of the entire constitution, which accounts for the breakdown of the immune system. As with other degenerative diseases the solution to the AIDS problem obviously lies in improved diet and other lifestyle factors.

As with cancer and the rest, the general health of the patient must be improved along lines already described. This subject is discussed in detail in the book *Health & Survival in the 21st Century*. [by Ross

## Random items of interest

The British Law Commission's report of 1974 by Britain's top doctors and lawyers disclosed that 1,000 handicapped children are born weekly in Britain suffering the effects of drugs and medical treatment during the mother's pregnancy. Dr R. Bellingham said that in Australia, one in very 50 children born had major abnormalities.

A Michigan State University study covered a group of women, the case histories of whom were watched from 1948 to 1972. Of the surviving women the study team found that those who looked younger than their years ate fewer calories and substantially less fat of all types, but at the same time more vitamins than those women who appeared older.

**The Pill:** The Pill has been shown to increase the risk of blood clotting leading to thromboembolism (lung clots) and strokes (*New England Journal of Medicine*, May, 1973).

Due to side effects far more serious than previously thought, the Pill would be banned in Australia within two years, so the Royal Commission Into Human Relationships (1975) was told by Dr J. Billings, head of St Vincent's Hospital's Neurology Department. (It has not been.)

Effects included deformation of babies, cancer of the vagina, gallstones, vomiting, abdominal cramps, breakthrough bleeding, breast changes, changes in menstruation, cervical erosion, jaundice, allergy rashes, headaches, dizziness, drowsiness and appetite changes.

Supporting evidence comes from Russia, UK, the Kentucky University, USA, the Johns Hopkins School of Medicine, USA.

**Medical Drugs:** Dr M. Silverman, a Professor of Pharmacology, University of California, said: "There are about 30,000 deaths each year in the USA from adverse reactions to drugs. Our figures also show approximately 4.5 million hospital admissions annually due to such adverse reactions, cost of which (in 1973) assess at \$3,600,000,000," he said. "The problem stems not only from the patients, but from the pharmacists, doctors and the hospitals. These figures included 24,000 deaths and 3,600,000 hospital admissions due to wrongly-prescribed drugs."

## Finger-lickin' what?

From the supplier of chicken feed: "Huntmill Broiler feeds contain the antibiotics, penicillin 3 ppm, bacetracin 4 ppm (as zinc bacitracin) and the growth promoter, 3 nitre 4 hydroxy phenyl arsenic acid 44 ppm. Also, coccidiostats are added to your order and the feed could therefore contain any of the following products, depending on your requirements:

Pancoxin Amprolium 100 ppm  
Ethopabata 5 ppm  
Sulphaquinoxaline 60 ppm  
Elancoban (Monensin) 100 ppm  
Zoamix (3-5 Dinetro-Toluamide) 125 ppm  
Nicarertson 100 ppm

Then you fry the chicken!

New York psychiatrist, Dr H. L. Newbold, is convinced that as many as 75% of all troubled marriages could be helped by dietary change.

Dr Emanuel Cheraskin of the University of Alabama, a famous authority on nutrition, stated flatly, "There is no question that there is a relationship between food and marriage success and failures--diet does

play a role in marital strife".

Dr John Knox, Professor and Chairman of the Department of Dermatology, Baylor College of Medicine, Houston, Texas, says the public have been brainwashed into a phobia of cleanliness. He said dermatologists in private practice see more disease resulting from excessive cleanliness than from lack of cleanliness. The natural surface oil in the skin is removed, dehydration occurs and protection against bacteria lost.

Professor Curtis Shears, organizer of Big Brothers of America, a rehabilitation center specializing in improved nutrition, says right diet can help stop delinquent children from turning into hardened criminals. Since its beginning in 1949, the organization has been 93% successful. Professor Shears, a former flagship Captain in the US 8th Fleet in World War II was Attorney General of the USA after the war, at which time he suffered a massive heart attack. His doctor told him frankly to go home to die as nothing more could be done and the hospital needed his bed. It was then that he cured himself with strict diet and set off around the world to study nutrition. He visited Hunza and Georgia (USSR), before founding Big Brothers. He founded the Nutritional Science Research Institute in Gloucester, England, and at 77 had two young children aged 9 and 13.

Professor Shears says cancer, kidney disease, heart disease and many others can be cured if detected early enough and the correct diet followed. He lists salt, refined sugar, canned foods, and pasteurized cows' milk as the main causes of disease in modern man.

Finally and sadly, this information from Scotland just about sums it all up.

- Scottish dietary fat consumption is one of the highest in the world. The per capita consumption is 19% higher than the rest of the UK.
- Hospital admissions for alcoholism among Scotsmen are seven times higher than the rest of the UK, five times higher for women.
- Bowel cancer incidence in Scotland is 19% higher than the rest of the United Kingdom.
- Incidence of cancer generally is second highest in the world (1974).
- Incidence of Multiple Sclerosis is the highest in the world (three times higher than anywhere else).
- Deaths from ischemic heart disease in 1974 were second highest in the world.
- Deaths from strokes were the highest in the world.

If you feel pity for Scotland, pause a moment and think again, because our own record of self-destruction is almost as bad.

## CHAPTER TWENTY-TWO

# ALTERNATIVE MEDICINE

*"To A progressive and unprejudiced thinkers it becomes clear that the Universe is not at the mercy of blind forces, but is governed by unchangeable laws; and that the phenomena of life and growth are the result of the wonderful and inimitable creative chemistry of Nature which unceasingly works towards perfection. "*

Otto Carque (1925)

This chapter is included as a guide to those intent on escaping the peril and frustration of the ever-expanding medical and drug industry, and having done so, may tend to adopt alternatives not a great deal better.

Alternative medicine is the name given to a collection of systems and methods intended to cure people's ailments without the use of surgery and drugs. These methods include the taking of synthetic vitamins, minerals and enzymes; acupuncture, chiropractic, homeopathy, herbs and herbal remedies, chelation, DMSO, and so on.

Orthomolecular medicine is an unorthodox concept of medicine within the category of Alternative Medicine which recognizes dietary errors to be responsible for disease but which concentrates on using synthetic vitamins and minerals to achieve improved body chemistry. In addition, the patient is tested for specific allergies which are then eliminated, but in most cases as with other forms of alternative medicine, the gross fundamental dietary errors are not corrected. Orthomolecular medicine is a "patchwork" system capable of only partial results which may however appear good by comparison to conventional medical treatment.

Often such "alternative" procedures are claimed to be natural remedies and indeed are less unnatural than removing organs by surgery or poisoning them with drugs. In most cases "alternative medicine" is helpful to sick people to some extent because their pain is relieved and perhaps the symptoms of disease are diminished or removed. Better results are achieved without the damaging side-effects of drugs. However, alternative medicine cannot be said to be natural because if the simple laws of nature are observed then no medicine of any kind is necessary. The body is self-healing.

Alternative medicine will however, play a valuable part in future treatment of disease simply because many people lack the intelligence and willpower to observe strict lifestyle habits, even when chronically ill.



## CHAPTER TWENTY-THREE

# THE HUMAN FACTOR

*"The common definition of man is false; he is not a reasoning animal. The best you can predict of him is, that he is an animal capable of reasoning."*

Warburton

It's a peculiar thing--humans are the only animals in the world capable of logic and reason, and yet they spend most of their time doing illogical and unreasonable things.

Aside from the fact that there are enough nuclear bombs stockpiled in the world to obliterate life on Earth many times over, and aside from the human devastation and pollution of forests, land, oceans and atmosphere, the human race is in more immediate danger from environmental factors surrounding people in everyday life.

Now that it is realized that little children, as they play, have within them the early stages of artery disease, that young men and women, as they frolic and laugh at life, do so with partially blocked coronary arteries--some of them indeed already afflicted with arthritis and some with early cancer--surely we should not be surprised at the relentless degeneration and mortality among the middle-aged.

Now that it is further realized that the dignified and trusted people to whom we look for guidance and protection, seem not to have much idea of what is happening or of what to do (perishing along with the rest), it becomes clear that survival is a matter of individual effort.

Taking stock of the situation we find:

1. Conventional medical treatment is utterly ineffectual against degenerative disease conditions, serving only to mask symptoms and relieve pain until the patient eventually dies. More often than not, great harm results from drug treatment. These "side effects" are in turn relieved by other drugs, and so on.

When remission of disease occurs or recoveries from lesser illnesses are made, rarely is medical treatment responsible. Records show that untreated patients or even primitive natives treated by witch doctors achieve the same overall recovery rates.

Specifically, heart patients should not be lulled into a sense of security because of symptomatic relief and should not readily accept by-pass surgery, which in most cases is avoidable.

2. The world abounds in misconceptions and false information, disseminated sometimes by the most respectable people.

Many long-established, influential institutions, government and private, set up for the purpose of acquiring and disseminating information about various diseases and their management, are little more than well-meaning bureaucracies compiling statistics, and reiterating out of date information, much of which is wrong or misleading. The misinformation stems mainly from ignorance, but also to a great extent from the lobbying and pressure from commercial interests. The greatest impediment to medical progress is the neglect by the medical establishments to investigate valuable research

data.

Recently, there have been belated admissions by various medical authorities that diet is a factor in the onset of a number of different degenerative diseases. These admissions are made in the form of announcements of "new information", although in most cases the information has been available for fifty years or more. For instance, the association of dietary fat with diabetes was shown by Dr R. Geyle of Columbia University in 1923. Later in 1935, Dr I. M. Rabinowitch of Canada, after a 5-year study of 1,000 case histories, presented information to the US Diabetic Association, which clearly demonstrated that blood fat was the prime causative factor in diabetes, but his information was rejected. Only today is this information being medically accepted, and Dr James Anderson of the University of Kentucky is becoming famous for his dietary treatment of diabetes. How did Dr Anderson discover this form of treatment? The fact is that Nathan Pritikin told him in 1975, and moreover, provided \$10,000 for Dr Anderson's first clinical trial. Notwithstanding all this, the best dietary advice forthcoming from the Diabetic Association today is a token reduction of dietary fat to 30% of total calories!

The American Medical Association and the American Heart Association apparently have been unaware of information known a hundred years ago. More recent documented information which has been virtually ignored since the 1940s and 1950s are the many case histories presented by Dr Lester Morrison of Los Angeles, and others, which demonstrate clearly the implication of dietary fat and cholesterol in coronary heart disease. It was shown also at that time how it was simple to reduce blood cholesterol by diet and that even a moderate reduction to 220 mg% reduced coronary deaths by 50-75%.

In 1965, writing in the *Journal of the American Medical Association*, Dr Meyer Freidman said:

"A meal rich either in animal or vegetable fat can lead to sludging of the blood and blocked capillaries for most of a 24-hour period, and one fatty meal follows another. At this writing, I know of no single phenomenon that has been so consistently neglected, in the study of heart disease, as this one. Later we may rue this inexcusable oversight."

Conveying a message a child would understand, the article was illustrated with actual photographs of blood vessels choked with sticky cells and sludge . . .

Doesn't anybody read *JAMA* ? Can't the specialists comprehend simple English? Here were are 31 years later with the AMA and the AHA still advising a high fat diet (30%) while their own tests have shown this diet to be ineffectual!

The cancer establishment has the worst history of pigheadedness and intrigue. Since as far back as 1809, when Dr Richard Lambe of London wrote a treatise on the successful treatment of cancer by a diet of raw vegetables, the medical authorities have resisted bitterly the idea that diet was a factor in the onset and regression of cancer. Many doctors over the years have successfully treated cancer patients by dietary means, but not only could they not get a hearing from the authorities, they were pressured and persecuted for stepping out of line. Fortunately, many of these doctors wrote books describing their work and successes, which today provide valuable references.

As described in Chapter 20, there is so much evidence of the implication of diet with cancer, it is unbelievable that the National Cancer Institute held off making its first admission regarding diet until 1979, and today, in line with the other medical groups, still recommends a fat intake of 30%.

In 1982 a comprehensive report called "Diet, Nutrition and Cancer" was issued by the US National Research Council. The report was prepared by a committee of people from the National Academy of Science, the National Academy of Engineering and the Institute of Medicine. The findings were that nutritional factors were significantly involved in the cause of cancer, but not only did the report display a lamentable lack of comprehension, it made no proposal at all that dietary correction should urgently be implemented in the treatment of the disease! It was a pussyfooting report but at least better than anything the multi-billion dollar National Cancer Institute has come up

with.

At a convention in San Diego in October, 1981, the Gerson Institute, which carries on the work of Dr Max Gerson (who died in 1958), presented 100 fully recovered "incurable" patients, half of them so-called "terminal" cancer patients, together with their medical histories. These people had been cured by dietary methods. The institute issued a formal public challenge to any medical authority to investigate these cases, but there has been no response, the same as with similar challenges in the past.

The most chilling indictment of the medical establishment (and there are many to choose from) could well be the Fitzgerald Report of 1953, instigated by Senator Charles Tobey, Chairman of the Senate Interstate and Foreign Commerce Committee, US Government. Attorney Benedict Fitzgerald was appointed to study the various aspects relating to cancer in the USA, including the operations of all individuals, organizations, foundations and clinics, their methods Of research, diagnosis, treatments and the efficacy thereof, as well as their fund-raising methods, financial structures and allocation of expenditure. The report disclosed a disgraceful state of intrigue, monopoly, dishonesty and suppression of information, but the report itself was suppressed and nothing came of it. However copies of the *Fitzgerald Report* are available today from the National Health Federation,. P.O. Box 688, Monrovia, Ca. 91016.

Thirty years after the Fitzgerald report, the intrigue and persecution continue. Although admitting the causes of cancer "are not understood" (by them) the medical establishment, despite its ignorance and failure still claims (and possesses) the supreme authority as to how a physician--regardless of his experience and results--must treat his patients and although the establishment at last has actually produced dietary advice on the prevention of cancer, a physician who treats a cancer patient with nutritional therapy is today still regarded as a quack and persecuted as a felon. The same physician if he mutilated his patients with unnecessary surgery or fearfully injured them with radiation or poisonous chemicals would be fully approved. Whether or how long the patients survive is inconsequential.

So oppressive and uncompromising has been the attitude of the American medical establishment in persecuting dedicated physicians that the Committee for Freedom of Choice in Medicine (California) is eminently to file an action before the Permanent Committee on Human Rights of the United Nations claiming that the US medical establishment is in gross violation of the UN Declaration of Human Rights Agreement of 1966.

The Arthritis Council, the MS Society and others, all have the same plodding negative attitude which stems from the total unawareness of the nature of the so-called degenerative diseases and of the underlying factors involved. Other-wise, if the medical profession did comprehend the nature of the different disease conditions, it would be obvious that there is no need for specialization and the accompanying specialized organizations that clutter our community.

3. Apart from inertia, the main influence which keeps orthodox medicine on the wrong track is the enormous power of the drug and chemical industries which, at huge expense, maintain a constant brainwashing campaign directed both at the medical profession and the general public. In addition, by their direct influence within the administration of various medical organizations, these industries control the allocation of the majority of research funds provided by public subscriptions and government funding, as well as the grants they make themselves. Thus drug research projects receive favorable consideration, while nutritional research is ignored.
4. There is a growing realization that prevention is better than cure, but unfortunately, there is a widespread misconception that prevention means merely the early detection of disease symptoms still to be treated in the conventional way. Early detection of symptoms is beneficial to the patient only if dietary and other changes are adopted as corrective measures.
5. The vitamin and health food industries are rapidly growing and becoming "big business". Although they don't cause the same harm as the drug companies, they don't provide the great benefits they advertise either. In the belief they are attaining vital health, many deluded people spend a great deal of money on food supplements and vitamins, only to achieve the distinction of having very

expensive urine.

6. Like the chemical and drug industries--the meat industry, the dairy industry, the poultry industry, the sugar industry, the liquor industry, the soft drink industry, the processed food industry, the fast food industry, the tobacco industry, the confectionery industry--or any other industry--are all intent on making money, and have little regard for ethics to do so. The Government makes a great song and dance about health but still subsidizes tobacco growers and panders to the other lobbyists, including the medical lobby.

To enhance sales, many of these industries advertise their products as beneficial to health or happiness, and commission prestigious people to promote them. The advertising and television industries, also profit motivated, don't care too much what products they advertise.

Advertising is not the only way to "con" the public; all sorts of connivance is used. When in 1979, the American Academy of Science was reported worldwide to state that cholesterol had not been proven to be a factor in heart disease, the meat and dairy industry benefited greatly. The Academy's statement, it should be noted, originated from Dr Olsen, a paid consultant to the US meat and dairy industry.

Ten years earlier, in 1969, when Dr Richard Aarons at Rockefeller University exposed yet again the dangers of polyunsaturated fat, the National Dairy Council gave him their "Man of the Year" award.

It should also be noted that the US National Dairy Council provides the bulk of the nutritional information used by the US Government and US educational authorities.

When Senator George McGovern in 1978 announced the Senate Select Committee's recommendation on diet for the American people, which suggested that small reductions in the intake of meat, eggs and dairy products should be made, there was a great outcry from producers. Even the American Medical Association objected, saying there was no evidence to show that the American diet should be changed, that vast economic dislocation could ensue, and that matters of diet were the concern of the physician/patient relationship!

The country needs a medical system, but not one which thrives on community sickness. Our present medical system fails because it is a government protected monopoly answerable only to itself. Despite the apparent wonders of medical science which are more like entertaining sideshows--a sort of pageantry to keep the peasants impressed--the medical system is stagnant, like an old feudal kingdom with all its protocols and bigotry. Like the mammoth trading monopolies of the past, it must change--or go out of business.

Meanwhile, addicted to the seemingly harmless pleasures of civilization, mankind careers on, only vaguely aware of the dangers staring us all in the face, and smug in the belief that modern technology can solve all problems. The problems however, ignore man-made rules, they are a product of the laws of Nature.

So the incidence of cancer, a rare disease one hundred years ago, increased to a figure of one person in eight by 1950 and today is almost one person in three (according to the American Cancer Society), and is still increasing. What would the figure be if cardiovascular disease did not intervene in half the population? The British Medical Association reports an increase of VD since 1957 of 1700%. "New" diseases like Legionnaires' disease, herpes, AIDS and others, increase despite the "imminent breakthroughs" by modern medicine.

Let's face it, civilization today is on the skids. Other civilizations have risen, flourished and vanished in the past. Ours won't be the first to do so, but who knows? It could be the last.

## **Health or wealth**

Three of the wealthiest men in the world, Aristotle Onassis, Howard Hughes and the Shah of Iran were, at the same time, three of the sickest. They were not old men either, and yet the most expensive medical

doctors, with all their space-age technology, could not save them. Compare their cases with that of Elizabeth May Doolin, a 75-year-old pensioner (see Chapter 2) from the small country town of Uralla, NSW. A few years ago she too was one of the sickest people in the world, immobile and awaiting death. Entirely on her own initiative, and without any outside assistance whatever, she adopted the Pritikin program, having read a simple description of it in the *Sydney Daily Mirror* (February, 1979) and, at no expense at all, she rapidly recovered her health and mobility.

It takes all kinds to make the world. Which kind are you?

## CHAPTER TWENTY-FOUR

# IN CONCLUSION

*"I pass with relief from the tossing sea of Cause and Theory  
to the firm ground of Result and Fact."*  
Winston Churchill

The adverse effects of the affluent society have not yet reached their worst, but fortunately many people are now aware of the dangers and are altering their lifestyle to avoid them.

There has been a marked decline in death rates from heart attacks over the last thirty years, particularly in the USA where the public is better informed. In the USA, the consumption of eggs has declined 25%, sugar 50%, coffee 40%, cigarette smoking has decreased, and there are ever-increasing numbers of vegetarians and joggers. In Finland, which had until recently the highest heart disease rate in the world, a public education campaign achieved a 15% reduction in heart attacks in a period of four years.

Unfortunately, gains related to the improved habits of one section of the population have been offset by the increase in other degenerative diseases such as cancer, herpes, AIDS, and so on, among the generation not yet coronary prone. With the ever-increasing intake of "take-away" foods loaded with fat, cholesterol, salt and sugar, many of the younger generation may be lucky to make middle age.

The decline must continue until the dangers of these deteriorating eating habits are recognized and it is realized that fondness for cooked, spiced and flavored food is an addiction more powerful than addiction to alcohol or nicotine. We are all addicted, and it takes strong motivation to resist this addiction.

The writer has been on a steadily improving lifestyle for about 35 years, and today fresh raw fruit and vegetables make up about 90% of my diet, with cooked vegetables and fish making up the rest. However, an all raw diet would, I think, be preferable. I avoid cereals and bread. The first benefit I experienced was the disappearance of arthritis in my right elbow and right foot when about 35 years ago, I cut down on meat and ate more vegetables and salads. This happened in a few days. The next benefits occurred after I commenced running, even at the beginning with only a couple of miles a day. In a few weeks my blood pressure returned to the level I had at 21 years of age and my resting pulse rate fell to 42. Twenty-two years ago, at a special eye test pilots have to take when they turn 50, I was told I would need reading glasses in two years, but in fact, my eyesight on subsequent tests still does not require them. The only dental treatment I have needed is the replacement of old fillings, and I have had no colds or other indispositions regardless of flu epidemics which seem to affect everyone else. As thousands of people have demonstrated, these benefits are attainable by even those stricken with the severest disorders, and the cost is--NIL.

Some good has eventuated from the recently completed US Government funded MRFIT (Multiple Risk Factor Intervention Trial) which involved 12,000 subjects over a six-year period at a cost of \$200 million. The goals of this project were to achieve, in six years, a 10% reduction of blood cholesterol, a 10% reduction of blood pressure and a reduction of smoking by one-third to one-half. 6,000 men were on the average American diet, and 6,000 were on the American Heart Association recommended diet. Results obtained were--cholesterol 7% and other factors 2% to 3%. Although the project failed, the good that came

from it was that the results were compared to those of the Pritikin Longevity Center where cholesterol is dropped 10% in six days, 29% in four weeks, and blood pressure 16% in four weeks! By diet, at no expense to the American taxpayers.

So while massively funded medical research projects have one by one failed, Nathan Pritikin, Charlotte Gerson, Ann Wigmore, and others, self-financed and overworked, have demonstrated results undreamed of by conventional doctors.

The revolution in the field of health is slowly gaining momentum. As Alexis Carrel predicted, dieticians are becoming doctors, and doctors are becoming (albeit slowly) dieticians.

o o o

John H. Tilden, MD, said it all back in 1926. Summing up in his book *Toxemia Explained*:

"In chronic disease, the treatment, first, last and all the time, must be with a view of getting rid of the toxemia. This consists of correcting whatever habits of life are producing enervation, and then gradually building up a normal digestion, assimilation and elimination.

"After 50 years of floundering in the great sea of medical and surgical speculation to find the causes of so-called diseases, all I could find was that all of the people we re sick part of the time, a part of the people were sick all of the time. But glory be, all of the people were not sick all of the time.

"Some people got well under my treatment and friends would say that I 'cured' them. Others died and friends would say that Providence removed them. I knew that I did not cure those who got well, and I did not like to acknowledge even to myself that I had killed those who died.

"It took a long time to evolve out of the one conventional idea of many diseases into the truth that there is but ONE disease, and that the 400 catalogued so-called diseases are but different manifestations of toxemia--blood and tissue uncleanliness."

o o o

It is all so utterly simple. There in a few words, Dr Tilden described the lessons learned in his long medical career. The summary of this entire book is even briefer:

1. It is natural to always be healthy.
2. A healthy body can easily defend itself against infection.
3. The degenerative diseases are, in fact, not diseases at all, they are only symptoms. They are symptoms, all, of one primary and basic disease, TOXEMIA --a poisoned, sludgy, de-oxygenated bloodstream.
4. If harmful influences are removed, and the body provided with correct proportions of natural food, together with rest, sunshine, fresh air and exercise, it will--entirely of its own accord--return itself to health.

We have seen how, in our way of life, degenerative diseases start in childhood and progress within us until advanced enough to become troublesome. Depending on your age and the rate at which you have allowed your body to degenerate, will depend the condition of your arteries and body tissue now.

Your life expectancy, in quality as well as years, now depends on whether, and to what degree, you are prepared to improve your lifestyle.

I have not over-simplified the methods by which you can attain the promised results. You will need some willpower. Partners, if they are wise, will go along with you. Otherwise you may lose them or they may lose you (to somebody else).

Sparkling eyes are hard to resist.

## THE AMBULANCE IN THE VALLEY

Joseph Malins

'Twas a dangerous cliff, as they freely confessed,  
Though to walk near its crest was so pleasant;  
But over its terrible edge there had slipped  
A duke, and full many a peasant.  
The people said something would have to be done,  
But their projects did not at all tally.  
Some said "Put a fence 'round the edge of the cliff,"  
Some, "An ambulance down in the valley."

The lament of the crowd was profound and was loud,  
As their tears overflowed with their pity;  
But the cry for the ambulance carried the day  
As it spread through the neighboring city.  
A collection was made, to accumulate aid,  
And the dwellers in highway and alley  
Gave dollars and cents--not to furnish a fence--  
But an ambulance down in the valley.

"For the cliff is all right if you're careful," they said;  
"And, if folks ever slip and are dropping,  
It isn't the slipping that hurts them so much  
As the shock down below--when they're stopping."  
So for years (we have heard), as these mishaps occurred  
Quick forth would the rescuers sally,  
To pick up the victims who fell from the cliff,  
With the ambulance down in the valley.

Said one, in a plea, "It's a marvel to me  
That you'd give so much greater attention  
To repairing results than to curing the cause;  
You had much better aim at prevention.  
For the mischief, of course, should be stopped at its source;  
Come, neighbors and friends, let us rally.  
It is far better sense to rely on a fence  
Than an ambulance down in the valley."

"He is wrong in his head," the majority said,  
"He would end all our earnest endeavor.  
He's a man who would shirk this responsible work,  
But we will support it forever.  
Aren't we picking up all, just as fast as they fall,  
And giving them care liberally?  
A superfluous fence is of no consequence  
If the ambulance works in the valley."

But a sensible few, who are practical too,  
Will not bear with such nonsense much longer;  
They believe that prevention is better than cure,  
And their party will soon be much stronger.  
Encourage them then, with your purse, voice and pen,  
And while other philanthropists dally,  
They will scorn all pretense and put up a stout fence



On the cliff that hangs over the valley.

Better guide well the young, than reclaim them when old,  
For the voice of true wisdom is calling,  
"To rescue the fallen is good, but 'tis best  
To prevent other people from falling."  
Better close up the source of temptation and crime  
Than deliver from dungeon or galley  
Better put a strong fence 'round the top of the cliff  
Than an ambulance down in the valley.

Cartoon: John Dubord, Ottawa, Canada.



Courtesy: Air Safety Digest, Australian Department of Aviation.

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